

# Uspješno starenje uz pomoć e-tehnologije

## Successful aging with help of e-technology

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### Sažetak

**Uvod i cilj:** Starenje je prirodan proces koji ovisi o mnogo faktora. Smatra se da osoba uspješno stari ako uz sveprisutnu razvijenost tjelesnih i mentalnih sposobnosti nema komorbiditeta. Cilj je rada istražiti percepciju starosti i značajke kvalitetnog starenja te načine ispunjavanja slobodnog vremena služenjem i primjenom e-tehnologije sudionika ovog istraživanja, a koji nisu smješteni u sustav institucijskog zbrinjavanja.

**Metode:** U svrhu prikupljanja podataka korišten je anketni upitnik s 20 tvrdnji o uspješnom starenju preuzetih od autorice Elizabeth A. Phelan te dodatna pitanja izrađena za potrebe istraživanja. Anketa je provedena putem Google Docs obrasca tijekom lipnja i srpnja 2020. godine. Istraživanjem je obuhvaćeno 109 sudionika, a pristigli podaci obrađeni su deskriptivnim i inferencijalnim statističkim metodama.

**Rezultati:** Provedeno istraživanje pokazalo je da je sudionicima najmanje važna duljina životnog vijeka. Kao prediktor uspješnog starenja ističe se zadovoljstvo vlastitim životom i samostalnost te cjeloživotno učenje. Starenjem se povećava negativna percepcija o uspješnom starenju. Isto tako, u istraživanju je identificirano da se odrasle osobe najviše koriste internetom kako bi komunicirale s bliskim ljudima te ga u pravilu koriste svakodnevno pomoću mobitela, tableta, laptopa ili stolnog računala. Ovim je istraživanjem dobiven uvid u način provedbe slobodnog vremena u odraslih osoba te osoba starije životne dobi, ali i u njihovu percepciju uspješnog starenja.

**Rasprava sa zaključkom:** Razvoj svijesti o važnosti uspješnog starenja postaje sve veća. Zdravstveni djelatnici, a posebice medicinske sestre, vlastitom percepcijom i edukacijom cjelokupne zajednice kvalitetu života i uspješno starenje svakog pojedinca mogu podići na višu razinu. S obzirom na neprestanu digitalizaciju i tehnološki razvoj, sve više odraslih osoba kao i osoba starije životne dobi češće će se koristiti internetom.

**Ključne riječi:** starenje, osobno zadovoljstvo, internet

**Kratak naslov:** Uspješno starenje

### Abstract

**Introduction and aim:** Aging is a natural process that depends on many factors. It's considered that a person successfully ages if, with the ubiquitous development of physical and mental abilities, there's no comorbidity. The goal of this paper is to investigate the perception of age, characteristics of quality aging and ways of fulfilling free time using a global computer network of participants of older age groups who aren't placed in the institutional care system.

**Methods:** For data collection, we used a survey questionnaire that included 20 statements about the successful aging of the author Elizabeth A. Phelan and additional questions developed for research purposes collection. The survey was conducted via the Google Docs form during June and July 2020. The research included 109 participants, and the received data were processed by descriptive and inferential statistical methods.

**Results:** The conducted research showed that the length of life is the least important for the participants. Satisfaction with one's own life and independence and lifelong learning stand out as a predictor of successful aging. Aging increases the negative perception of successful aging. Also, the research identified that adults use the Internet mostly to communicate with their closest ones and, in general, they use it on a daily bases via cell phones, tablets, laptops, or computers. This research gave an insight into the way of spending quality time in adults and elderly people, but also their perception of successful aging.

**Discussion with the conclusion:** Increasing awareness about successful aging is growing. Health professionals, especially nurses and medical technicians, by their perception and education of the whole community, can bring the quality of life and aging of each individual to a higher level. Given the clumsy digitization and technological development, more and more adults and the elderly more often use the Internet.

**Keywords:** aging, personal satisfaction, Internet

**Running head:** Successful aging

Received May 5<sup>th</sup> 2021;

Accepted July 12<sup>th</sup> 2021;

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### Uvod

Republika Hrvatska spada među najstarije zemlje Europe što dokazuje podatak da je udio stanovništva starijeg od 65 godina u 2019. godini iznosio 20,6 % od ukupnog broja stanovnika Republike Hrvatske. Porast broja starijeg stanovništva očekuje se i u budućnosti [1]. Prema informacijama kojima raspolaže Fond Ujedinjenih naroda za stanovništvo (UNFPA) od 2012. godine do 2022. godine u svijetu će bi-

### Introduction

The Republic of Croatia is one of the oldest countries in Europe, as evidenced by the fact that the share of the population over the age of 65 in 2019 was 20.6% of the total population of the Republic of Croatia. An increase of the elderly population is expected in the future as well [1]. According to the information available to the United Nations Population Fund, from 2012 to 2022 there will be more than a billi-

ti više od milijarde ljudi starijih od 60 godina. Činjenica je da u današnje vrijeme ljudi žive duže i kvalitetnije od svojih prethodnika [2]. Budući da tehnologija i medicina svakodnevno napreduju, zdravstvena se skrb unaprjeđuje na svim razinama pa tako i u skrbi za osobe starije životne dobi. Kako se kronološki vijek produžuje, tako je i sve većem broju osoba starijih dobnih skupina potrebna podrška u zadovoljavanju osnovnih ljudskih potreba te u osiguravanju mogućnosti aktivnog starenja [3].

Uspješno starenje pod alternativnim pojmom „produktivno starenje“ u praksu je unio Robert Butler 1982. godine. Definirao ga je „kao zaobilazanje bolesti i invalidnosti, očuvanje fizičkih i mentalnih funkcija na visokoj razini, te trajno angažiranje u društvenim i produktivnim aktivnostima“ (plaćeni rad, slobodno vrijeme) [4]. Slobodno vrijeme svaka osoba provodi na njoj najugodnije načine [5]. Iako starenjem opadaju motoričke, vizualne i slušne sposobnosti pojedinca, odrasle osobe kao i osobe starije životne dobi sve se više služe informacijskom i komunikacijskom tehnologijom te nisu pasivni promatrači vlastite okoline, već aktivno sudjeluju u njoj. Shodno tome, procjenjuje se da će 2025. godine u europskim zemljama više od petine stanovnika starijih od 60 godina redovito upotrebljavati e-tehnologiju [6, 7].

Iako se čini da se osobe starijih dobnih skupina ne znaju služiti modernom tehnologijom, njihova upotreba važna je i ima potencijalne dobrobiti za zdravlje i povećanje kvalitete života [8]. Također, sve je više zdravstvenih usluga koje se nude putem interneta [9]. U situacijama kontinuirane uporabe interneta u osoba starije životne dobi aktivira se dio mozga odgovoran za donošenje kompliciranih zaključaka što omogućuje povećanje pamćenja i samim time može utjecati na smanjenje razvoja demencije [10]. Osim pozitivne učinkovitosti na zdravstveno stanje, primjena e-tehnologije ima pozitivan učinak i na društveni život odraslih osoba i osoba starijih dobnih skupina. Uporaba e-tehnologije omogućuje održavanje kontakata s bližnjima, informiranje o stanju u svijetu, ali i zabavu [7]. Da bi se osobe starije životne dobi odvažile na uporabu tehnologije u svakodnevnoj praksi, ona mora biti jednostavna za rukovanje, praktična i financijski dostupna [11]. Klasični vidokrug starenja prvenstveno ističe loše komponente koje ono nosi. Povrh svega, to su stereotipi čija je istinitost često upitna. Zato je važno usmjeriti se na pozitivne aspekte starosti i time život osoba starijih dobnih skupina učiniti sretnijim i kvalitetnijim [12]. U tom je procesu neizostavna uloga medicinskih sestara i tehničara koji pružaju skrb povećavajući samostalnost pojedinca. Ujedno, oni redovito educiraju osobe svih dobnih skupina o važnosti očuvanja zdravlja i prevencije bolesti [13].

## Metode i sudionici

### Tehnika prikupljanja podataka

Kao tehnika prikupljanja podataka korištena je anketa distribuirana na društvenoj mreži Facebook u periodu od 18. 6. 2020. do 13. 7. 2020. godine. Sudjelovanje u istraživanju bilo je dobrovoljno i anonimno te je svakom od sudionika na početku ispunjavanja anketnog upitnika bila objašnjena svrha i cilj istraživanja.

on people over the age of 60 in the world. The fact is that nowadays people live longer and better than their predecessors [2]. As technology and medicine keeps advancing daily, health care is improving at all levels, including in the care of the elderly. As the chronological age lengthens, an increasing number of older people need support in meeting basic human needs and in providing opportunities for active aging [3]. Successful aging under the alternative term “productive aging” was introduced into practice by Robert Butler in 1982. He defined it as “avoiding illness and disability, preserving high-level physical and mental functions, and permanent engagement in social and productive activities “(paid work, free time) [4]. Each person spends their free time in the ways they find most comfortable [5]. Although the motor, visual and auditory abilities of an individual decline with age, adults as well as the elderly are increasingly using informational and communicational technology and are not passive observers of their own environment, but actively participate in it. Accordingly, it is estimated that in 2025 in European countries more than a fifth of the population over the age of 60 will regularly be using e-technology [6,7].

Although older people do not seem to know how to use modern technology, their use is important and brings potential health benefits and increased quality of life [8]. Also, there are more and more health services being offered online [9]. In situations of continuous use of the Internet, the part of the brain of the elderly people which is responsible for making complicated conclusions is activated, which enables an increase in memory and thus can reduce the development of dementia [10]. In addition to the positive effectiveness on health, the application of e-technology has a positive effect on the social life of adults and the elderly. The use of e-technology enables maintaining contact with the loved ones as well as informing about the state of world affairs but also entertainment [7]. In order for the elderly to dare to use technology in everyday practice, it must be easy to handle, practical and affordable [11]. The classic view of aging primarily highlights the bad components it carries. Above all, these are some stereotypes whose truthfulness is often questioned. That is why it is important to focus on the positive aspects of old age and thus make the lives of people of older age groups happier and of better quality [12]. In the process, the role of nurses and technicians who provide care by increasing the independence of the individual is indispensable. At the same time, they regularly educate people of all ages about the importance of maintaining health and preventing disease [13].

## Methods and participants

### Data collection technique

As a technique of data collection, a survey distributed on the social-networking website Facebook in the period from 18/06/2020 to 13/07/2020 was used. Participation in the research was voluntary and anonymous, and each of the participants was explained the purpose and the goal of the research at the beginning of the survey.

## Mjerni instrument

Za potrebe istraživanja korišten je upitnik autorice Elizabeth A. Phelan (2004) koji se sastoji od 20 tvrdnji o uspješnom starenju [14] te je modificiran s četiri dodatna pitanja o korištenju i dostupnosti interneta te pitanjima o sociodemografskim podacima. Tvrdnje o uspješnom starenju autorice Phelan (2004) sudionici su shodno vlastitoj percepciji ocijenili važnima, nevažnima ili neutralnima. Zbog daljnjih analiza, formiran je konačan rezultat svakog pojedinca u upitniku. To je učinjeno tako što su se zbrajali odgovori pojedinca za svaku pojedinu tvrdnju pri čemu je najviši rezultat iznosio 2, dok je najmanja vrijednost bila 0.

## Uzorak

Uzorak je prigodan i čini ga 109 sudionika. Kriteriji uključivanja u istraživanje bili su: dob sudionika iznad 40 godina, informatička pismenost te život u kućanstvu. Najveći broj sudionika čine osobe ženskog spola (75,2 %, N = 82) dok je manji broj sudionika muškog spola (24,8 %, N = 27). Najviše sudionika (53,2 %, N = 58) ima završeno srednjoškolsko obrazovanje, visokoškolsko obrazovanje ima 34,9 % (N = 38), osnovnoškolsko 11,0 % (N = 12) i 0,9 % (N = 1) sudionika nema završenu školu. Svi sudionici stariji su od 40 godina, a najstarija osoba koja je sudjelovala u istraživanju ima 96 godina. U prosjeku kronološka dob iznosi 60,55 godina.

## Obrada podataka

Podaci su analizirani računalnim programom SPSS Statistics, verzija 24.0. Također, obrađeni su deskriptivnim (mjere centralne tendencije i varijabiliteta te Spearmanov koeficijent korelacije) i inferencijalnim statističkim metodama (Hi-kvadrat i Kolmogorov-Smirnovljevi test normalnosti distribucija). Zaključci o razlikama i povezanosti podataka donošeni su na nivou značajnosti od 95 %, uz razinu rizika 5 %.

## Ciljevi i hipoteze

Cilj je ovog rada istražiti percepciju starosti i značajke kvalitetnog starenja te načine ispunjavanja slobodnog vremena primjenom i sluzenjem e-tehnologijom sudionika odrasle i starije životne dobi koji nisu korisnici institucionalne skrbi.

U istraživanju su postavljene dvije hipoteze:

H<sub>1</sub>: S porastom godina javlja se negativna konotacija prema uspješnom starenju.

H<sub>2</sub>: Najveći broj sudionika internetom se služi u svrhu komuniciranja s bližnjima.

## Rezultati istraživanja

U istraživanju 96,33 % (N = 105) sudionika za uspješno starenje važnim smatra osjećaj zadovoljstva samim sobom i svojim životom. Kao prediktor uspješnosti pokazala se i samostalnost koju 95,41 % (N = 104) sudionika navodi važnom za uspješno starenje sve do trenutka smrti. Važnim za uspješno starenje pokazao se rad na sebi i učenje novih stvari kod 66,05 % (N = 72) sudionika. Ukupno 93,57 % (N = 102) sudionika smatra da je važno očuvati dobro zdrav-

## Measuring instrument

For the purposes of the research, a questionnaire by E. Phelan (2004) was used, which consists of 20 statements on successful aging and was modified with four additional questions on the use and availability of the Internet and questions on socio-demographic data. Phelan's claims about successful aging were assessed by the participants as important, unimportant or neutral, according to their own perception. Due to further analysis, the final result of each individual in the questionnaire was formed. This was done by summing the individual's responses for each individual statement with the highest score being 2, while the lowest value was 0.

## Sample

The sample is convenient and consists of 109 participants. The criteria for inclusion in the research were: the age of participants over 40, computer literacy and life in the household. The largest number of the participants are females (75.2%, N=82), while a smaller number of participants are males

(24.8%, N=27). Most participants (53.2%, N=58) have completed secondary education, 34.9% have completed higher education, 11.0% have completed primary education and 0.9% of the participants have not completed school. All participants are older than 40, and the oldest person that participated in the research is 96. The average chronological age is 60.55.

## Data processing

Data were analyzed by computer program SPSS Statistic, version 24.0. Also, they were processed by descriptive (measures of central tendency and variability and Spearman's correlation coefficient) and inferential statistical methods (Chi square and the Kolmogorov-Smirnov test of normality of distributions). The conclusions on differences and correlation of data were made at the significance level of 95%, with a risk level of 5%.

## Goals and hypotheses

The aim of this paper is to investigate the perception of age and the characteristics of quality aging and ways to fill free time through the application and use of e-technology of adult and elderly participants who are not users of institutional care.

Two hypotheses were set in the research:

H1: With increasing age, a negative connotation towards successful aging occurs.

H2: Most participants use the Internet to communicate with their loved ones.

## Research results

In the research, 96.33% (N=105) of the participants consider the feeling of satisfaction with themselves and their lives important for successful aging. Independence, which 95.41% (N = 104) of the participants stated was important for successful aging until the moment of death, also proved to be a predictor of success. Working on oneself and lear-

lje kako bi starost bila uspješna. Usamljenost loše utječe na uspješno starenje kod 94,50 % (N = 103) sudionika. U prilog tome, 88,99 % (N = 97) sudionika smatra da je važno biti okružen ljudima kao što su obitelj i prijatelji te 81,65 % (N = 89) sudionika smatra važnim biti uključen u socijalni život zajednice kojoj pripadaju. Spearmanovim koeficijentom korelacije potvrđeno je da s porastom godina života opada pozitivna percepcija sudionika prema uspješnom starenju, odnosno da se javlja negativna konotacija prema istom ( $r = -0,319$ ,  $p < 0,01$ ).

Većina sudionika (69,72 %, N = 76) posjeduje dva ili više tehnološka uređaja (mobitel, laptop, tablet, stolno računalo) za pristup internetu. Isključivo stolno računalo posjeduje samo 0,9 % (N = 1) sudionika, dok mobitel ima 28 sudionika (25,7 %). Najveći broj sudionika (97,2 %, N = 106) ima pristup internetu u vlastitom domu. Sudionici primarno upotrebljavaju internet za komunikaciju s bližnjima (70,6 %, N = 77). Manji broj sudionika upotrebljava internet kao izvor informacija o stanju u svijetu (24,8 %, N = 27) te za provjeru bankovnog stanja, njih 5 (4,6 %). Svaki dan internetom se koriste 94 sudionika (86,2 %), dok njih 6 (5,5 %) uopće ne upotrebljava internet. Najviše sudionika koristi se internetom u svrhu komunikacije s bližnjima što je potvrđeno Hi kvadrat testom ( $\chi^2 = 136,25$ ,  $df = 3$ ,  $p < 0,01$ ).

## Rasprava

Sudionici ovog istraživanja krucijalnim za kvalitetno i uspješno starenje smatraju zadovoljstvo samim sobom i vlastitim životom. Prema podacima istraživanja Phelan i suradnika (2004), 90 % starijih osoba razmišlja o uspješnom starenju [14]. Rezultati ovog istraživanja ukazuju na važnost očuvanja zdravlja u provedbi uspješnog starenja. Prema istraživanju Tate i suradnika (2003), 30 % ispitanika uspješno starenje označava kao stanje dobrog zdravlja bez boli [15]. Li i suradnici (2014) potvrdili su u svom istraživanju da osobe koje u anamnezi imaju preboljeni moždani udar neuspješno stare [16]. Svjetska zdravstvena organizacija i Nacionalni institut za starenje ističu da zdravo i uspješno starenje nadilazi izbjegavanje bolesti i invaliditeta [17]. Prema Rusac (2011), više od 50 % ispitanika prosječne dobi od 74 godine većinu aktivnosti obavlja samostalno uz određene teškoće pa je samim time i zadovoljstvo starenjem osrednje [18]. Protekla tri desetljeća u Zagrebu realizira se program Sveučilišta za treću životnu dob u sklopu Pučkog otvorenog učilišta koji omogućuje sudionicima učenje stranih jezika, stjecanje znanja iz informatičkih područja te područja opće kulture i različitih kreativnih radionica. Prema Čurin (1995), 64 % sudionika pohađa nastavu kako bi naučili nove stvari. Također, Čurin (2018) potvrđuje da je 41,2 % polaznika uključeno u aktivnosti Sveučilišta za treću životnu dob kako bi naučili nešto novo [19]. S obzirom na to da je usamljenost negativno iskustvo za svakog pojedinca, ne čudi da je negativno povezana s uspješnim starenjem. Prema Stapić (2012), prisutna je negativna povezanost između osjećaja usamljenosti i osobne dobrobiti osoba starije životne dobi uz značajnost rizika manju od 1 % (Pearsonov koeficijent korelacije =  $-0,54$ ) [20]. Petrak i suradnici (2006) potvrdili su da što je podrška okoline manja, zadovoljstvo životom, a samim time i uspješno je starenje niže [21]. Pre-

ning new things in 66.05% (N = 72) of the participants proved to be important for successful aging. A total of 93.57% (N = 102) of the participants believe that it is important to maintain good health in order that aging be successful. Loneliness adversely affects successful aging in 94.50% (N = 103) of the participants. In addition, 88.99% (N = 97) of the participants consider being surrounded by people such as family and friends important, and 81.65% (N = 89) of the participants consider it important to be involved in the social life of the community to which they belong. Spearman's correlation coefficient confirmed that with increasing age, the positive perception of the participants towards successful aging decreases, meaning that a negative connotation towards the same occurs ( $r = -0.319$ ,  $p < 0.01$ ).

The majority of the participants (69.72%, N = 76) have two or more technological devices (a mobile phone, a laptop, a tablet, a desktop computer) for obtaining Internet access. Only 0.9% (N = 1) of the participants have a desktop computer, while 28 participants have a mobile phone (25.7%). The largest number of the participants (97.2%, N = 106) have Internet access in their own home. The participants primarily use the Internet to communicate with their loved ones (70.6%, N = 77). A smaller number use the Internet as a source of information on the situation in the world (24.8%, N = 27) and to check the banking situation, 5 of them (4.6%). Every day, 94 participants (86.2%) use the Internet, while 6 (5.5%) do not use it at all. Most participants use the Internet for the purpose of communication with their relatives, which was confirmed by the Hi square test ( $\chi^2 = 136,25$ ,  $df = 3$ ,  $p < 0.01$ ).

## Discussion

The participants in this research consider satisfaction with themselves and their own lives to be crucial for quality and successful aging. According to the research conducted by Phelan and associates (2004), 90% of older people think about successful aging [14]. The results of this research indicate the importance of maintaining health in the implementation of successful aging. According to the research done by Tate and associates (2003), 30% of respondents label successful aging as a state of good health without pain [15]. Li and associates (2014) confirmed in their study that people with a history of stroke have failed to age [16]. The World Health Organization and the National Institute on Aging emphasize that healthy and successful aging goes beyond avoiding disease and disability [17]. According to Rusac (2011), more than 50% of respondents with an average age of 74 perform most activities independently with certain difficulties, and therefore the satisfaction with aging is mediocre [18]. For the past three decades, the University of the Third Age program has been implemented in Zagreb within the Public Open University, which enables participants to learn foreign languages, acquire knowledge in computer science and general culture and various creative workshops. According to Curin (1995), 64% of the participants attend classes to learn new things. In addition, Čurin (2018) confirms that 41.2% of students are involved in the activities of the University for the Third Age so as to learn something new [19]. Given that loneliness is a negative experience for every individual, it is not surprising that it is

ma Chunkai (2019), osobe starije životne dobi sa zadovoljavajućim i pozitivnim odnosima unutar obitelji imaju uspješnije starenje i manji rizik za pojavu bolesti kao što je depresija [22]. Rennemark i Hagberg (1997) tvrde da su stjecanje prijateljstva i podrška obitelji ključni u postizanju kvalitete života [23].

Većina sudionika iz ovog istraživanja upotrebljava i posjeduje neki od tehnoloških uređaja, njih 98,2 % (N = 107). Prema podacima koje je iznio Eurostat u dokumentu Ageing Europe (2017), petina osoba u dobi od 65 do 74 godine nikada nije koristila računalo, a više od dvije trećine spomenutih nalazilo se u Hrvatskoj, Grčkoj, Bugarskoj i Italiji. Također, prema istraživanju istih, 48 % stanovništva starije životne dobi nije upotrebljavalo globalnu računalnu mrežu unatrag tri mjeseca [24]. Kada se govori o pristupu internetskoj mreži, rezultati ovog istraživanja pokazuju da čak 97,2 % (N = 106) sudionika ima mogućnost pristupa internetu iz vlastitog doma. U 2012. godini pristup internetu bio je dostupan 39 % Amerikanaca starije životne dobi [25]. Ukupno 86,2 % (N = 94) sudionika provedenog istraživanja internetom se koristi svakodnevno, dok 5,5 % (N = 6) Internet uopće ne upotrebljava. Prema Nekić i suradnicima (2016), 40 % starije populacije upotrebljava globalnu računalnu mrežu jednom tjedno [11].

Ujedno, potvrđeno je da se sudionici ovog istraživanja najviše služe internetom u svrhu komunikacije s bližnjima, njih 70,6 % (N = 77). Navedeni se rezultati podudaraju s istraživanjem autora Russel, Campbell i Hughes (2008) koji su zaključili da se 78,7 % ispitanika služi globalnom računalnom mrežom kako bi komuniciralo s dragim osobama. Činjenica je da se broj „srebrnih surfera“ koji se koriste informacijskom i komunikacijskom tehnologijom povećava. Pretpostavlja se da će se u budućnosti znatno veći broj stanovništva starije životne dobi služiti e-tehnologijom jer je digitalizacija u društvu kontinuirana, a stanovništvo koje prelazi u stariju životnu dob sve obrazovanije [26].

## Zaključak

Da bi osobe starijih dobnih skupina bile zadovoljne i samo-aktualizirane, nužno je osigurati dostupnost sadržaja koji bi ih mogli zainteresirati u njihovu mjestu prebivališta. S obzirom na učestalost posjedovanja tehnoloških uređaja i redovitost korištenja interneta, sudionici ovog istraživanja svrstavaju se u kategoriju „srebrnih surfera“. Ovim je istraživanjem dobiven uvid u korištenje e-tehnologije i u percepciju uspješnog starenja sudionika. Dobiveni rezultati doprinose sestrinskoj profesiji u kreiranju skrbi za ovu skupinu pacijenata jer omogućuju bolje shvaćanje želja i potreba osoba starije životne dobi koje teže uspješnom starenju. Kvalitete koje osoba posjeduje starenjem ne nestaju i potrebno ih je nastaviti isticati.

## Nema sukoba interesa

negatively associated with successful aging. According to Stapić (2012), there is a negative association between feelings of loneliness and personal well-being of the elderly with a significant risk of less than 1% (Pearson's correlation coefficient = -0.54) [20]. Petrak and associates (2006) confirmed that the lower the support of the environment, the lower the life satisfaction, and thus successful aging [21]. According to Chunkai (2019), older people with satisfactory and positive relationships within the family have a more successful aging and a lower risk of developing diseases such as depression [22]. Rennemark and Hagberg (1997) argue that gaining friendships and family support is key to achieving quality of life [23]. Most of the participants from this research use and own some of the technological devices, 98.2% of them (N = 107). According to the data provided by Eurostat in the document Ageing Europe (2017), one fifth of the people aged 65 to 74 have never used a computer, and more than two thirds of those mentioned were in Croatia, Greece, Bulgaria and Italy. Also, according to the same survey, 48% of the elderly population did not use the global computer network for three months [24].

When it comes to access to the Internet, the results of this research show that as many as 97.2% (N = 106) of the participants have an opportunity to access the Internet from their own home. In 2012, 39% of older Americans had access to the Internet. A total of 86.2% (N = 94) of the participants in the survey use the Internet on a daily basis, while 5.5% (N = 6) do not use it at all. According to Nekić and associates (2016), 40% of the elderly population use a global computer network once a week [11]. At the same time, it was confirmed that the participants in this research mostly use the Internet for the purpose of communicating with their relatives, 70.6% of them (N = 77). These results coincide with a study by Russel, Campbell, and Hughes (2008) who concluded that 78.7% of the respondents use a global computer network to communicate with their loved ones. The fact is that the number of "silver surfers" who use information and communication technology is increasing. It is assumed that in the future a significantly larger number of elderly people will use e-technology as digitalization in society is continuous, and the population moving into old age is increasingly educated [26].

## Conclusion

In order for people of older age groups to be satisfied and self-actualized, it is necessary to ensure the availability of content of general interest in their place of residence. Given the frequency of ownership of technological devices and regular use of the Internet, the participants in this study are classified in the category of "silver surfers". This research provided insight into the use of e-technology and the perception of successful aging of the participants. The obtained results contribute to the nursing profession in creating care for this group of patients because they provide a better understanding of the wishes and needs of the elderly who strive for successful aging. As we age, the qualities that a person possesses do not disappear and it is necessary to continue to emphasize them.

## Authors declare no conflict of interest

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