

Psihološki i zdravstveni korelati uspješnog starenja: razlike s obzirom na spol, dob i obrazovanje

/ Psychological and Health Correlates of Successful Aging: Gender, Age and Educational Differences

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Istraživanja u području starenja danas više nisu usmjerena samo na kronične bolesti i funkcionalne gubitke, već uključuju i pozitivne aspekte starosti kao što su očuvanje i razvijanje potencijala i sposobnosti te kvalitete života u kasnijim godinama. Populacija osoba starije dobi vrlo je heterogena pa postoje prijedlozi da ih je potrebno razlikovati prema obrazovanju, spolu, dobi, funkcionalnoj sposobnosti i drugim obilježjima. Osnovni cilj ovoga rada bio je provjeriti postoje li dobne, spolne i obrazovne razlike u uspješnom starenju i nekim njegovim korelatima kao što su zdravlje i psihološka dobrobit, te je provedeno istraživanje na uzorku od 329 sudionika. Rezultati analiza pokazali su da muškarci (neovisno o dobi) procjenjuju svoje tjelesno zdravlje značajno boljim nego žene. Starije stare osobe su zadovoljnije financijama od mlađih starih, a mlađi su otvoreniji prema novim životnim iskustvima od starijih samo u ženskom poduzorku. Mlađe stare žene procjenjuju svoj proces starenja uspješnijim te se smatraju generativnijima nego mlađi stari muškarci, no stariji stari muškarci su uspješniji i imaju veći osjećaj generativnosti nego starije stare žene. Značajne razlike potvrđene su i među osobama različitog obrazovnog statusa. Ovakvi nalazi ukazuju da se u starosti osobe ne bi trebale tretirati kao homogena populacija, te potvrđuju važnost i potrebu razmatranja starih osoba kao heterogenih podskupina.

/ Contemporary research in the field of aging no longer focuses only on chronic diseases and loss of function, but also encompasses positive aspects of aging, such as the maintenance and development of potential and abilities and the quality of life in later years. The population of older people is very heterogeneous and there are proposals to differentiate the group according to education, gender, age, functional abilities, and other characteristics. The main objective of this paper was to investigate whether there are age-, gender-, and education-specific differences in successful aging together with some of its correlates, such as health and psychological well-being. The study was conducted on a sample of 329 participants. The results of the analysis show that men (regardless of age) rate their physical health significantly higher than women. Older elders are more satisfied with their finances than younger elders, and younger elders are more open to new life experiences than older elders in the female subsample only. Younger old women rate their aging process as more successful and are more generative than younger old men, but older old men are more successful and have a greater sense of generativity than older old women. Significant differences were also found between people with different educational status. These findings suggest that people in old age should not be treated as a homogeneous population and confirm the importance and need to consider older people as heterogeneous subgroups.

ADRESA ZA DOPISIVANJE /**CORRESPONDENCE**

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KLJUČNE RIJEČI / KEY WORDSUspješno starenje / *Successful Aging*Sociodemografska obilježja / *Sociodemographic Characteristics*Dobrobit / *Well-Being*Zdravlje / *Health***TO LINK TO THIS ARTICLE:** <https://doi.org/10.24869/spsih.2021.259>**UVOD**

Porast udjela osoba starije dobi u svjetskoj populaciji praćen je povećanim interesom za istraživanje osobina starih i procesa starenja. Dugo su ta istraživanja bila usmjerena pretežno na kronične bolesti i funkcionalne gubitke, a sada se pomiču prema pozitivnim aspektima starosti odnosno očuvanju i razvijanju potencijala i sposobnosti u okrilju koncepta uspješnoga starenja. Ta su istraživanja važna jer omogućavaju razumijevanje čimbenika koji pridonose kvaliteti života u kasnijim godinama. Iako do danas ne postoji konsenzus o tome kako definirati uspješno starenje, mnogi se autori sve češće slažu s time da je riječ o višedimenzionalnom konstrukt. U tablici 1 prikazane su različite komponente uspješnoga starenja koje su korištene u pojedinim istraživanjima (1). Ovakav nam prikaz daje mogućnost shvaćanja raznovrsnosti definiranja i mjerenja uspješnoga starenja iz kojeg zatim proizlaze i razlike i nekonzistentnosti u dobivenim rezultatima i zaključcima. I dok neki definiraju i mjere uspješno starenje samo jednom dimenzijom (2,9), drugi se koriste većim brojem, ali isključivo biomedicinskih komponenata (3,6), a sve je više onih koji uključuju i biomedicinske i psihosocijalne komponente (4,5,7,8,10-12).

Iako se osobe starije dobi tretiraju kao jedinstvena skupina, populacija starih vrlo je heterogena. Neki autori predlažu da bi se, u cilju uvažavanja njihove heterogenosti, osobe starije dobi u istraživanjima trebale klasificirati prema obrazova-

INTRODUCTION

The increase in the proportion of older people in the world population has led to increased interest in research on the characteristics of older people and the aging process. For a long time, this research focused primarily on chronic diseases and functional decline. Currently, it is turning towards the positive aspects of aging, i.e., the maintenance and development of potential and abilities within the concept of successful aging. This research is important because it allows us to better understand the factors that contribute to the quality of life in later years. Although to date there is no consensus on how to define successful aging, many authors increasingly agree that it is a multidimensional construct. Table 1 shows the different components of successful aging that have been used in various studies (1). This presentation provides us with an opportunity to understand the diversity in how successful aging is defined and measured, which then leads to differences and inconsistencies in results and conclusions. While some define and measure successful aging with only one dimension (2, 9), others use more than exclusively biomedical components (3,6), and an increasing number of studies include both biomedical and psychosocial components (4,5,7,8,10,11,12).

Although the elderly are treated as a single group, the elderly population is very heterogeneous. Some authors suggest that older people

TABLICA 1. Identificirane komponente u definicijama uspješnog starenja (1)**TABLE 1.** Identified components in the definitions of successful aging (1)

Autori / Authors	Biomedicinske komponente / Biomedical components			Psihosocijalne komponente / Psychosocial components			
	Odsustvo bolesti i invaliditeta / Absence of disease and disability	Dobro tjelesno funk. / Good physical funct.	Dobro kognitivno funk. / Good cognitive funct.	Uključenost u život / Involvement in life	Sreća ili zadovoljstvo životom / Happiness and life satisfaction	Opća dobrobit / General well being	Adaptacija i kontrola / Adaptation and control
Baltes and Baltes (2)							+
Berkman <i>et al.</i> (3)	+	+	+				
Garfein and Herzog (4)		+	+	+	+		
Lee, Lan and Yen (5)		+		+		+	
McLaughlin, Jette and Connell (6)	+	+	+				
Menec (7)		+	+		+	+	
Rowe and Kahn (8)	+	+	+	+			
Stawbridge <i>et al.</i> (9)		+					
Vaillant and Mukamal (10)	+			+	+	+	
Von Faber <i>et al.</i> (11)		+	+	+			
Young <i>et al.</i> (12)	+	+	+	+	+		

nju, spolu, kronološkoj i kognitivnoj dobi, funkcionalnoj sposobnosti i/ili drugim obilježjima (17-20), što najbolje pokazuju poznate studije osoba starije dobi poput MacArthurove studije (8), Berlinske studije starenja (21), Bonnske studije (22) ili Georgijske studije stogodišnjaka (23). Meta-analiza istraživanja radova u ovom području (13) pokazala je da je mlađa životna dob jedan od najkonzistentnijih prediktora uspješnog starenja, pri čemu 86,7 % obuhvaćenih istraživanja ukazuje da postoji značajna povezanost dobi i uspješnog starenja. Pri usporedbi s mlađim starima, stariji stari koji imaju 75 i više godina u 70 % slučajeva doživljavaju manje uspješnog starenja (14). Uz to, u 50 % longitudinalnih istraživanja koja su bila obuhvaćena meta analizom (13), žene su doživljavale veću razinu uspješnog starenja u odnosu na muškarce, a iznimno, u samo su jednom istraživanju muškarci imali višu razinu uspješnog starenja (15). Neki autori (16) smatraju da muškarci postižu višu prosječnu vrijednost od žena onda kada je uspješno starenje definirano na temelju biološkog i laičkog modela, te da nema efekta spola

should be differentiated in research by education, sex, chronological and cognitive age, functional abilities, and/or other characteristics to account for their heterogeneity (17, 18, 19, 20). This is best evidenced by well-known studies of aging on elderly such as the MacArthur Study (8), the Berlin Aging Study (21), the Bonn Study (22), and the Georgian Centenarian Study (23). A meta-analysis of research in this area (13) has shown that younger age is one of the most consistent predictors of successful aging. 86.7% of studies indicate that there is a significant association between age and successful aging. Compared with younger older people, older people aged 75 years and older experience less successful aging 70% of the time (14). Furthermore, women experienced higher levels of successful aging than men in 50% of the longitudinal studies covered by the meta-analysis (13), and exceptionally, men had higher levels of successful aging in only one study (15). Some authors consider (16) that men achieve a higher average score than women when successful aging is defined on the

kada je uspješno starenje definirano bilo kojim drugim, kao primjerice socijalnim ili psihološkim modelom. Longitudinalno istraživanje (24) provedeno na reprezentativnom uzorku osoba starijih od 60 godina koje su praćene tijekom šest godina pokazalo je postojanje značajnih razlika između muškaraca i žena u uspješnom starenju koje je bilo definirano tjelesnim (odsutnost bolesti), mentalnim (normalno kognitivno funkcioniranje i odsutnost depresije) i socijalnim indikatorima (dobra socijalna podrška i uključenost u aktivnosti). Kada su u analizu uzete i osobe koje su preminule tijekom praćenja, rezultati su pokazali efekte spola, jer su stare žene bile bolje u aktivnostima dnevnog funkcioniranja u odnosu na muškarce. No, kada je analiza uključivala samo preživjele sudionike, starije su osobe (neovisno o spolu) imale višu razinu poteškoća u obavljanju dnevnih aktivnosti, oštećenije kognitivne funkcije, pokazivale su depresivne simptome i nisu bile uključene u produktivne aktivnosti u odnosu na mlađe.

Za operacionalizaciju središnjeg konstrukta u ovom smo istraživanju koristili Ljestvicu samoprocjene uspješnoga starenja (25) koja je prilično heterogena i zahvaća različite aspekte uspješnog starenja. Iako ljestvica pokazuje jednofaktorsku strukturu (26), čestice koje ju čine zahvaćaju sve dimenzije koje su prikane u tablici 1: odsutnost bolesti i invaliditeta (*Dobrog sam zdravlja; Kronične bolesti značajno smanjuju kvalitetu mog života*); dobro tjelesno i kognitivno funkcioniranje (*Sposoban sam postići sve ono što trebam i nešto od onoga što želim; Nastavljam učiti nove stvari i u kasnijim godinama.*), uključenosti u život (*Uključen/na sam u svijet koji me okružuje; Radim na plaćenim ili volonterskim aktivnostima nakon uobičajene dobi za umirovljenje.*), opću dobrobit (*Osjećam se dobro sa samim/samom sobom.*), te adaptaciju i kontrolu (*Uspješno se prilagođavam promjenama koje su povezane sa starenjem.*).

S obzirom na postojeći trend starenja populacije smatramo da svaka spoznaja koja može

basis of the biological and lay models and that there is no gender effect when successful aging is defined according to other models, such as the social or psychological model. A longitudinal study (24) conducted on a representative sample of people over 60 years of age followed for 6 years showed significant differences between men and women in successful aging defined by physical (absence of disease), mental (normal cognitive functioning and absence of depression), and social indicators (good social support and involvement in activities). When individuals who died during the follow-up were also included in the analysis, the results showed gender effects, as older women were better able to perform activities of daily living compared with men. However, when only surviving participants were included in the analysis, older individuals (regardless of gender) had higher levels of difficulty performing activities of daily living, impaired cognitive function, higher levels of depressive symptoms, and were not engaged in productive activities compared with younger individuals.

To operationalize the central construct in this study, we used the Successful Aging Self-Assessment Scale (25), which is quite heterogeneous and covers various aspects of successful aging. Although the scale has a single-factor structure (26), its items cover all the dimensions listed in Table 1: absence of illness and disability (*I am in good health; Chronic illnesses significantly limit my quality of life*); good physical and cognitive functioning (*I am able to accomplish everything I need and some of what I want; I continue to learn new things in later years*); participation in life (*I am involved in the world around me; I engage in paid or volunteer activities after the usual retirement age*); general well-being (*I am comfortable with myself*); and adaptation and control (*I successfully adapt to the changes associated with aging*).

Given the current trend of population aging, we believe that any knowledge that can help

pridonijeti objašnjavanju složenosti samog procesa starenja, kao i svega onoga što pridonosi očuvanju zdravlja i kvalitete života u starijoj dobi zaslužuje pozornost kako kliničara tako i istraživača.

explain the complexity of the aging process, as well as factors that contribute to maintaining health and quality of life in old age, deserves the attention of both clinicians and researchers.

CILJ ISTRAŽIVANJA

Iako se osobe starije dobi obično tretiraju kao homogena skupina, one to zapravo nisu. Stoga je osnovni cilj ovog istraživanja bio provjeriti razlikuju li se starije osobe različite dobi, spola i različitog stupnja obrazovanja u uspješnom starenju i nekim zdravstvenim i psihološkim korelatima starenja. Kao mjere zdravlja koristili smo samoprocjene tjelesnog i mentalnog zdravlja, dok su mjere psihološke dobrobiti odnosno psihološki korelati uključivali optimizam, otvorenost prema iskustvu, generativnost, zadovoljstvo životom, financijsku sigurnost te životna žaljenja koji su se i u ranijim istraživanjima pokazali značajno povezanima s uspješnim starenjem, iako konceptualiziranim na različite načine.

AIM OF THE STUDY

Although older people are usually treated as a homogeneous group, they are not. Therefore, the main objective of this study was to investigate whether older people of different ages, genders, and educational levels differ with respect to successful aging and some of its health and psychological correlates. Self-ratings of physical and mental health served as measures of health, whereas measures of psychological well-being and psychological correlates included optimism, openness to experience, generativity, life satisfaction, financial security, and life regrets, which have been significantly associated with successful aging in previous research, albeit conceptualized in different ways.

HIPOTEZE

U ovom smo istraživanju očekivali da će mlađe stare osobe biti uspješnije od starijih starijih osoba, te boljeg tjelesnog i mentalnog zdravlja. Na temelju rezultata prethodnih istraživanja očekivali smo da obrazovaniji uspješnije stare (14,27,28,29), te da će žene uspješnije starjeti od muškaraca.

HYPOTHESES

In this study, we expected that younger old people would be more successful than older old people and have better physical and mental health. Based on the results of previous research, we expected that people with higher levels of education would be more successful (14,27,28,29) and that women would be more successful than men.

METODA

Sudionici i postupak

Sudionici ovog istraživanja su osobe (329) u dobi od 65 do 95 godina ($M = 72,75$; $SD = 5,89$), od kojih 189 žena i 140 muškaraca. Na temelju dobi klasificirali (30) smo naše sudionike kao

METHOD

Participants and procedure

Participants in this study ($n=329$) were 65 to 95 years old ($M = 72.75$; $SD = 5.89$), of whom 189 were women and 140 men. Based on age, we classified (30) our participants as younger

mlađe (65-75 god.) i starije stare (76-85 god.), a s obzirom da je u ovom uzorku svega šest sudionika bilo starije od 85 godina, njihovi podaci nisu analizirani zasebno već pridruženi skupini starijih. Zastupljeni su sudionici iz 17 hrvatskih županija pri čemu je najveći postotak onih u Istarskoj (27,1 %), Splitsko-dalmatinskoj (23,7 %) i Zadarskoj (15,5 %) županiji. Većina ispitanih osoba je u vrijeme ispitivanja bila u braku (56,8 %), trećinu uzorka (33,7 %) činili su udovci i udovice, a manji je postotak onih koji nikada nisu bili u braku (3 %), razvedenih (4,9 %), ili su živjeli u nevjenčanoj zajednici (1,5 %). S obzirom na obrazovnu strukturu gotovo je polovina imala završenu srednju školu (47,4 %), oko trećine nepotpunu i završenu osnovnu (33,1 %), a 19,5 % imalo je višu ili visoku školu. Uzorak je činilo pretežno gradsko stanovništvo (60,2 %); dok je 26,1 % živjelo na selu te 13,7 % u manjem mjestu.

Uzorak je nastao metodom snježne grude, a podatke su prikupljali individualno istraživači i studenti Sveučilišta u Zadru i Sveučilišta Jurja Dobrile u Puli u sklopu projekta Demografske i biopsihosocijalne odrednice uspješnoga starenja (DBOUS, IP-2020-23). Tijekom istraživanja sudionicima je osigurana anonimnost i povjerljivost podataka. Prosječno vrijeme potrebno za primjenu upitnika kretalo se između 20 i 40 minuta.

Mjerni instrumenti

Ljestvica samoprocjene uspješnog starenja (25) ima 20 čestica, a izrađena je slijedom popisa osobina uspješnog starenja (31) koji uključuje tjelesno i psihičko zdravlje, dobro funkcionalno stanje te dobro socijalno funkcioniranje. Na čestice u obliku tvrdnji kao "Imam prijatelje i obitelji koji su tu zbog mene" sudionici odgovaraju ljestvicom od 5 stupnjeva (od *uopće se ne odnosi na mene* do *u potpunosti se odnosi na mene*), a ukupan rezultat koji se postiže na ljestvici je mjera u u kojoj osobe vlastito starenje procje-

(65-75 years) and older old (76-85). Since this sample included only six participants older than 85, their data were not analysed separately but joined to a group of older old adults. Participants from 17 Croatian counties were represented, with the largest proportion in the counties of Istria (27.1%), Split-Dalmatia (23.7%) and Zadar (15.5%). The majority of respondents were married at the time of the survey (56.8%), a third of the sample (33.7%) were widows and widowers, and a smaller percentage accounted for those who were never married (3%), divorced (4.9%) or living in a cohabitation relationship (1.5%). In terms of educational attainment, nearly half of the respondents had a secondary school degree (47.4%), about one-third had an incomplete or full elementary school degree (33.1%), and 19.5% had a college degree. The sample was predominantly urban (60.2%), while 26.1% of the participants were rural and 13.7% lived in a smaller town.

The sample was recruited using the snowball method and data were collected individually by researchers and students from the University of Zadar and Juraj Dobrila University of Pula as part of the Demographic and Biopsychosocial Determinants of Successful Aging (DBOUS, IP-2020-23) project. During the survey, participants were assured of anonymity and confidentiality of the data. The average time required to complete the questionnaire ranged from 20 to 40 minutes.

Instruments

The Successful Aging Self-Assessment Scale (25) includes 20 items and is based on a list of characteristics for successful aging (31), which include physical and mental health, good functional status, and good social functioning. Participants respond to the items in the form of statements such as "I have friends and family who are there for me" on a 5-point scale (from

njuju kao uspješno. Ljestvica ima jednofaktorsku strukturu, a pouzdanost tipa Cronbach alfa u uzorku ovoga istraživanja iznosi 0,87.

Podljestvica otvorenosti iskustvu iz HEXACO-PI (R) upitnika (32,33) sadrži 10 čestica koje zahvaćaju osobine kao što su osjećaj za estetiku, znatiželju, kreativnost i nekonvencionalnost. U ovom je istraživanju korišten hrvatski prijevod (34), a na tvrdnje se odgovara pomoću ljestvice Likertovog tipa od 5 stupnjeva. Ukupan rezultat zbroj je procjena na deset čestica ljestvice podijeljen ukupnim brojem čestica. Podljestvica je na ovom uzorku pokazala jednofaktorsku strukturu i koeficijent pouzdanosti Cronbach alfa od 0,76.

Loyola ljestvica generativnosti (35) služi ispitivanju generativne brige odnosno zaokupljenosti dobrobiti mlađih generacija kao i osobnim doprinosom mlađima i društvu u cjelini. U ovom je istraživanju korištena adaptirana verzija (36) koja sadrži 17 tvrdnji (npr. "Osjećam da će moji doprinosi postojati i nakon moje smrti") na koje se odgovara ljestvicom od 5 stupnjeva, od 1 (*uopće se ne odnosi na mene*) do 5 (*u potpunosti se odnosi na mene*). Viši rezultat na ljestvici upućuje na izraženiju generativnost. Ljestvica ima jednofaktorsku strukturu i visoku pouzdanost tipa unutarnje konzistencije (0,86).

Ljestvica optimizma (Life Orientation Test-Revised - LOT-R) (37) sastoji se od tri pozitivno i tri negativno strukturirane čestice na koje se odgovara pomoću ljestvice procjene od pet stupnjeva (od *uopće se ne slažem* do *potpuno se slažem*). Viši ukupan rezultat na ovoj ljestvici ukazuje na višu orijentaciju prema optimizmu, no pouzdanost ove ljestvice tipa unutarnje konzistencije bila je relativno niska (0,55) u ispitanom uzorku osoba starije dobi.

Samoprocjena zdravlja zahvaćena je pomoću dviju čestica od kojih se jedna odnosi na mentalno, a druga na tjelesno zdravlje. Uz pomoć ljestvice procjene od pet stupnjeva sudionici su procjenjivali svoje zdravlje u rasponu od *vrlo lošeg* do

does not apply to me at all to *totally applies to me*). The total score on the scale indicates the extent to which subjects perceive their own aging as successful. The scale has a one-factor structure while the reliability coefficient of Cronbach's alpha in the sample of this study is 0.87.

The *Openness to Experience* subscale from the HEXACO-PI - (R) questionnaire (32, 33) contains 10 items that capture traits such as sense of aesthetics, curiosity, creativity, and unconventionality. In this study, the Croatian translation (34) was used, and the statements are answered with a 5-point Likert scale. The total score is the average of the scores on the ten items of the scale divided by the total number of items. In this sample, the subscale had a one-factor structure and the Cronbach alpha reliability coefficient of 0.76.

The *Loyola Generativity Scale* (35) examines generative care or concern with the well-being of younger generations and personal contributions to young people and society as a whole. In this study, an adapted version (36) was used that includes 17 statements (e.g., *I feel as though my contributions will exist after I die*) answered on a 5-point scale ranging from 1 (*does not apply to me at all*) to 5 (*totally applies to me*). A higher score on the scale indicates more pronounced generativity. The scale has a single-factor structure and high internal consistency (0.86).

The *Life Orientation Test-Revised Scale (LOT-R)* (37) consists of three positively and three negatively structured items answered using a five-point rating scale (from *strongly disagree* to *strongly agree*). A higher total score indicates a stronger orientation toward optimism, but the internal consistency of the scale was relatively low in the elderly model studied (.55).

Self-assessment of health is measured with two items, one related to mental health and the other to physical health. Using a five-point

izvršnog, a čestice nisu zbrajane već su u analizi prikazane zasebno.

Zadovoljstvo životom mjereno je jednom česticom (*Koliko ste u cjelini zadovoljni svojim životom?*) s ljestvicom odgovora od pet stupnjeva (od *potpuno nezadovoljan/na* do *potpuno zadovoljan/na*).

Zadovoljstvo financijama mjereno je jednom česticom (*Koliko se osjećate sigurnima u financijskom pogledu i zadovoljni svojim primanjima?*) uz ljestvicu procjene od pet stupnjeva (od *nimalo siguran/na* i *zadovoljan/na* do *jako siguran/na* i *zadovoljan/na*).

Životna žaljenja mjerena su pomoću dviju čestica od kojih se jedna odnosila na žaljenja zbog propuštenih prilika u životu, a druga na žaljenja zbog pogrešnih akcija. Na obje čestice o životnim žaljenjima sudionici odgovaraju ljestvicom od 5 stupnjeva, od 1 (*nimalo*) do 5 (*jako mnogo*).

REZULTATI

U prvom koraku analize izračunali smo osnovne deskriptivne indikatore za sve ispitane varijable na ukupnom uzorku, a nakon toga i koeficijente korelacije. Nizom jednosmjernih ANOVA provjerene su spolne i dobne razlike u uspješnom starenju i zdravstvenim i psihološkim korelatima, dok je niz jednosmjernih analiza kovarijance korišten kako bi se za iste varijable provjerile i razlike s obzirom na obrazovanje uz kontrolu efekta dobi.

U tablici 2 prikazani su osnovni deskriptivni parametri i povezanosti ispitanih varijabli na ukupnom uzorku sudionika. Ako se usporede dobivene srednje vrijednosti s teorijskim rasponom možemo vidjeti da osobe starije dobi procjenjuju svoje mentalno zdravlje i zadovoljstvo životom vrlo dobrim; uspješno starenje, zadovoljstvo financijama te tjelesno zdravlje procjenjuju kao dobro, a životna žaljenja su relativno niska. Ovakvi su rezultati očekivani s

rating scale, participants rated their health from *very poor* to *excellent*. The items were not summed but were presented separately in the analyses.

Life satisfaction was measured with one item (*How satisfied are you with your life overall?*), using a five-point response scale (from *completely dissatisfied* to *completely satisfied*).

Material satisfaction was measured with one item (*How secure do you feel financially and are you satisfied with your income?*) using a five-point rating scale (from *not at all secure and satisfied* to *very secure and satisfied*).

Life regrets was measured with two items, one related to regret about missed opportunities in life and the other related to regret about wrong actions. Participants answered both questions about regret on a 5-point scale ranging from 1 (none) to 5 (very).

RESULTS

In the first step of the analysis, we obtained the basic descriptive indicators for all the variables studied in the total sample and then the correlation coefficients. A series of one-way ANOVAs examined sex and age differences in successful aging, health, and psychological correlates, while a series of one-way analyses of covariance were performed to test differences in education, controlling for the age effect.

Table 2 shows the basic descriptive parameters and correlations of the variables studied in the total sample of participants. When we compare the obtained mean values with the theoretical range, we can see that the elderly rate their mental health and life satisfaction as very good; successful aging, financial satisfaction, and physical health as good, while life regrets are rated relatively low. These results were to be expected, since this was a non-institutionalized community-dwelling sample of younger and older old people.

TABLICA 2. Deskriptivni pokazatelji i Pearsonovi koeficijenti povezanosti ispitivanih varijabli (N=329)
TABLE 2. Descriptive indicators and Pearson correlation coefficients of examined variables (N = 329)

Varijable / Variables	US / SA	OI / Op	G	O	TZ / PH	MZ / MH	ZŽ / LS	F / MS	Ža / LRa	Žn / LRm
Uspješno starenje (US) / Successful aging (SA)	1.00									
Otvorenost prema iskustvu (OI) / Openness (Op)	.31**	1.00								
Generativnost (G) / Generativity (G)	.61**	.30**	1.00							
Optimizam (O) / Optimism (O)	.42**	.27**	.33**	1.00						
Tjelesno zdravlje (TZ) / Physical health (PH)	.49**	.25**	.22**	.26**	1.00					
Mentalno zdravlje (MZ) / Mental health (MH)	.46**	.14*	.34**	.32**	.43**	1.00				
Zadovoljstvo životom (ZŽ) / Life satisfaction (LS)	.56**	.12*	.36**	.34**	.40**	.41**	1.00			
Zadovoljstvo financijama (F) / Material satisfaction (MS)	.32**	.03	.18**	.25**	.15**	.25**	.38**	1.00		
Žaljenje zbog akcija (Ža) / Life regrets for action (LRa)	-.20**	-.08	-.13*	-.08	-.16**	-.14*	-.24**	-.12*	1.00	
Žaljenje zbog neakcija (Žn) / Life regrets for missed opportunities (LRm)	-.24**	-.01	-.19**	-.09	-.01	-.17**	-.27**	-.18**	.50**	1.00
<i>M</i>	3.31	3.89	3.54	3.31	3.20	3.68	3.84	3.34	2.72	2.59
<i>SD</i>	0.64	0.65	0.68	0.63	0.80	0.85	0.82	1.03	1.14	1.10
Raspon / Range	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00

* $p < 0.05$. ** $p < 0.01$

obzirom da se radi o neinstitucionaliziranom i prigodnom uzorku mlađih i starijih starih osoba koje žive u svojim domovima

Može se vidjeti da postoje značajne pozitivne korelacije između samoprocjene uspješnoga starenja i generativnosti, otvorenosti prema iskustvu, optimizma, tjelesnog i mentalnog zdravlja, zadovoljstva životom i financijama, te značajne negativne korelacije uspješnog starenja i životnih žaljenja. Uz to, uočene su i brojne značajne korelacije između samih korelata. Generativnost je u značajnoj pozitivnoj korelaciji s otvorenošću prema iskustvima, optimizmom, tjelesnim i mentalnim zdravljem, te zadovoljstvom životom i financijama, a u negativnoj korelaciji s obje vrste životnih žaljenja. Zanimljivo je da optimizam nije u značajnoj korelaciji sa žaljenjem zbog propuštenih prilika ili neučinjenih akcija. Značajne pozitivne korelacije postoje i između tjelesnog

The study reveals significant positive correlations between self-assessment of successful aging and generativity, openness to experience, optimism, physical and mental health, life satisfaction, and financial satisfaction, and significant negative correlations between successful aging and life regret. In addition, a number of significant correlations were observed between the correlates themselves. Generativity correlated significantly positively with openness to experience, optimism, physical and mental health, and life satisfaction and finances, and negatively with both types of life regrets. Interestingly, optimism did not significantly correlate with regret for missed opportunities or indecisive action. Significant positive correlations also appeared between physical and mental health and life satisfaction and finances.

In accordance with the recommendations of the World Health Organization, in the second

i mentalnog zdravlja sa zadovoljstvom životom i financijama.

Sukladno preporukama Svjetske zdravstvene organizacije, u drugom smo koraku analize naše sudionike klasificirali kao mlade i starije stare te provjerili postoje li dobne i spolne razlike u uspješnom starenju i nekim njegovim korelatima (zdravlje i psihološka dobrobit). Iako se osobe starije od 85 godina klasificiraju kao osobe u dubokoj starosti (30) u ovom smo ih radu priključili skupini starijih s obzirom da njihov vrlo mali broj u našem uzorku nije mogao značajno utjecati na distribucije rezultata. Niz provedenih ANOVA 2 (dob) x 2 (spol) pokazao je postojanje značajnog efekta spola za tjelesno zdravlje; značajnog efekta dobi za zadovoljstvo financijama, kao i postojanje značajnih interakcijskih efekata dobi i spola za uspješno starenje, generativnost i otvorenost prema iskustvu (tablica 3). Muškarci procjenjuju svoje tjelesno zdravlje značajno boljim nego žene, a starije su stare osobe značajno zadovoljnije svojim financijama u usporedbi s mladim starima.

step of the analysis, we divided our participants into younger and older elderly to test for age and gender differences in successful aging and some of its correlates (health and mental well-being). Although people older than 85 are classified as oldest old (30), we included them in the older group, since their very small number in our sample could not significantly affect the distribution of results. A series of 2 (age) x 2 (gender) ANOVAs conducted showed a significant gender effect for physical health, a significant age effect for financial satisfaction, and significant interaction effects between age and gender for successful aging, generativity, and openness to experience (Table 3). Men rated their physical health significantly higher than women, and older seniors were significantly more satisfied with their finances compared with younger seniors.

From the interaction between age and gender for successful aging shown in Figure 1, we can observe that younger old women rate their aging as more successful than older old women,

TABLICA 3. Rezultati dvosmjernih analiza varijanci za uspješno starenje i korelate s obzirom na dob i spol
TABLE 3. Results of two-way analysis of variances for successful aging and correlates with respect to age and gender

Varijable / Variables	Spol / Gender		Dob / Age		ANOVA		
	M / Men	Ž / Women	Mlađi stari / Younger old	Stariji stari / Older old	Spol / Gender F _{1,327}	Dob / Age F _{1,327}	Spol x dob / Gender x age F _{3,323}
Samoprocjena uspješnog starenja / Successful aging	3.68	3.66	3.64	3.70	0.10	0.71	6.76*
Otvorenost prema iskustvu / Openness	3.84	3.99	3.93	3.71	0.16	1.62	5.70*
Generativnost / Generativity	3.43	3.60	3.66	3.46	0.03	0.26	5.14*
Optimizam / Optimism	3.34	3.30	3.28	3.36	0.23	0.97	.36
Tjelesno zdravlje / Physical health	3.35	3.07	3.20	3.22	8.26**	0.05	1.66
Mentalno zdravlje / Mental health	3.69	3.68	3.64	3.73	0.01	0.79	0.21
Zadovoljstvo životom / Life satisfaction	3.90	3.81	3.80	3.90	0.89	1.07	3.45
Zadovoljstvo financijama / Material satisfaction	3.45	3.33	3.25	3.53	0.95	5.24*	2.34
Žaljenje zbog akcija / Life regrets for action	2.70	2.79	2.62	2.67	0.26	0.57	0.87
Žaljenje zbog neakcija / Life regrets for missed opportunities	2.60	2.66	2.60	2.35	0.49	1.36	1.36

*p < 0.05. **p < 0.01

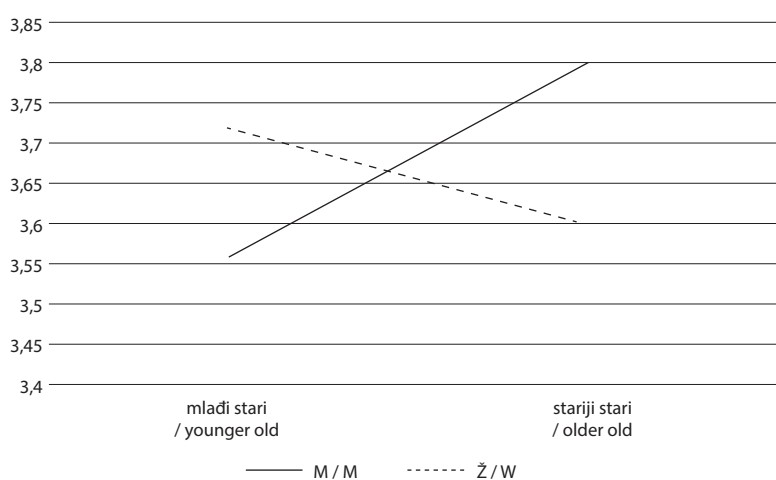
Iz interakcijskog efekta dobi i spola za uspješno starenje koji je prikazan na slici 1 moguće je vidjeti da mlađe stare žene procjenjuju svoj proces starenja uspješnijim od starijih starih žena, dok stariji stari muškarci procjenjuju svoje starenje uspješnijim od mlađih starih muškaraca.

Na slikama 2 i 3 prikazani su interakcijski efekti dobi i spola za otvorenost prema iskustvu i generativnost iz kojih je vidljivo da se mlađe stare žene osjećaju otvorenijima i generativnijima u odnosu na starije stare žene, dok se kod muškaraca stariji stari sjećaju otvoreniji novim iskustvima i generativniji od mlađih.

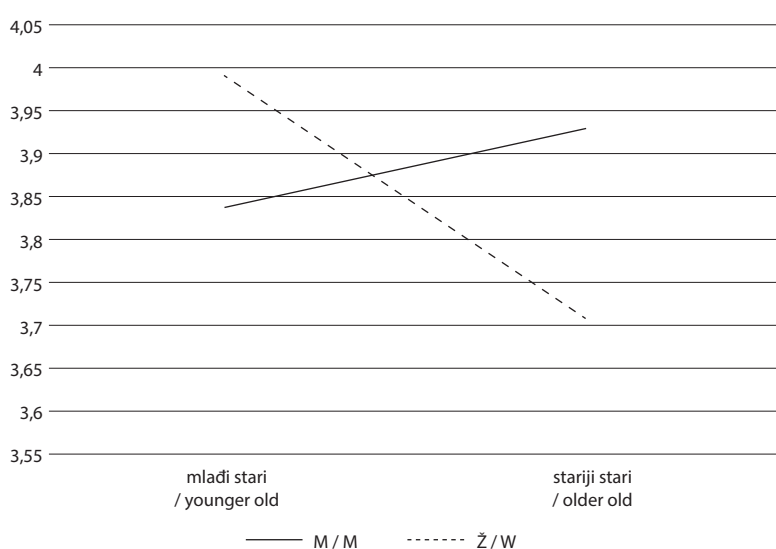
while older old men rate their aging as more successful than younger older men.

Figures 2 and 3 show the interaction effects of age and gender for openness to experience and generativity. This indicates that younger older women feel more open and generative than older old women, while older old men are more open to new experiences and more generative than younger old men.

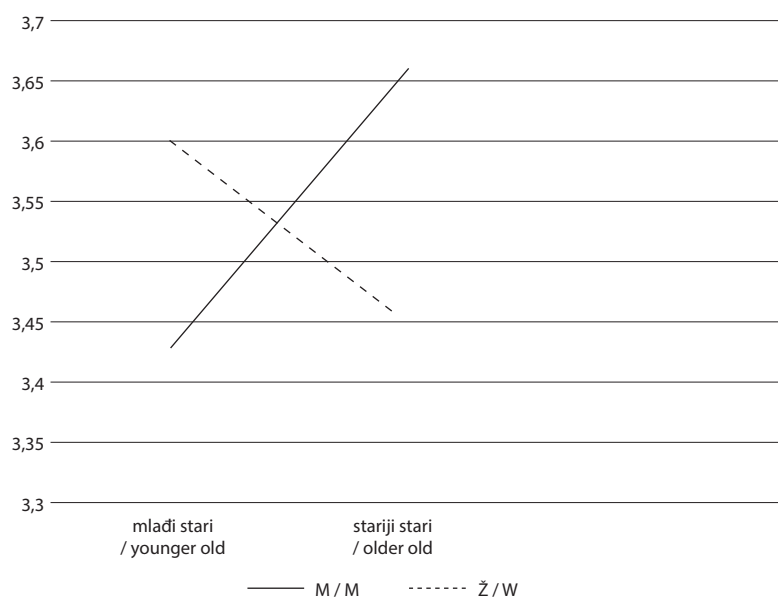
In the final step of the analysis, we wanted to test whether older people with different levels of education differ in terms of successful aging and its correlates. Given the possibility that



SLIKA 1. Razlike u uspješnom starenju s obzirom na dob i spol
FIGURE 1. Differences in successful aging with respect to age and gender



SLIKA 2. Razlike u otvorenosti prema iskustvu s obzirom na dob i spol
FIGURE 2. Differences in openness with respect to age and gender



SLIKA 3. Razlike u generativnosti s obzirom na dob i spol
FIGURE 3. Differences in generativity with respect to age and gender

U posljednjem koraku analize željeli smo provjeriti razlikuju li se osobe starije dobi različitog stupnja obrazovanja prema uspješnom starenju i njegovim korelatima. S obzirom da postoji mogućnost da su razlike u obrazovanju zapravo produkt dobnih razlika zbog čega su stariji stari manje obrazovani od mlađih, izračunali smo koeficijent korelacije između dobi i obrazovanja. Utvrđena je statistički značajna, iako niska, negativna korelacija ($-0,14$; $p < 0,01$) koja je potvrdila našu pretpostavku o odnosu dobi i obrazovanja, te je u nastavku proveden niz jednosmjernih analiza kovarijance (tablica 4) u kojima smo kontrolirali dob kao kovarijantu. Dobiveni rezultati pokazali su da među osobama s različitim stupnjem obrazovanja postoje statistički značajne razlike u uspješnom starenju, otvorenosti prema iskustvu, optimizmu i tjelesnom zdravlju. Za testiranje značajnosti razlika između triju skupina različitog stupnja obrazovanja koristili smo Student–Newman–Keulsov test (SNK) koji je pokazao da se osobe starije dobi koje imaju visoku i višu stručnu spremu procjenjuju značajno uspješnijima u procesu starenja i optimističnije su od onih s osnovnom školom. Uz to, osobe starije dobi s višim

differences in education are actually a product of age differences, resulting in older old people being less educated than younger old people, we tested a correlation coefficient between age and education. A statistically significant, albeit small, negative correlation ($-.14$; $p < .01$) was found, confirming our assumption about the relationship between age and education. Therefore, a series of one-way analyses of covariance were performed below (Table 4), in which we controlled for age as a covariate. The results indicate that there are statistically significant differences between individuals with different levels of education in terms of successful aging, openness to experience, optimism, and physical health. To test the significance of the differences between three groups with different levels of education, we used the Student–Newman–Keuls test (SNK), which showed that the college-educated subjects are significantly more successful in aging and more optimistic than those with elementary education. In addition, college-educated and high school-educated older people rate their physical health as better and are more open to new experiences than those with elementary education. The results

TABLICA 4. Jednosmjerna analiza kovarijance za ispitivanje razlika u uspješnom starenju i korelatima između tri skupine različitog stupnja obrazovanja s kronološkom dobi kao kovarijatom**TABLE 4.** One-way analysis of covariance to examine differences in successful aging and correlates between three groups of different levels of education with chronological age as covariate

	OŠ / Elementary school N = 109	SŠ / High school N = 156	VsŠ i VSS / College N = 64	F _{2,326}	p	S-N-K	Eta
Uspješno starenje / Successful aging kovarijanta/covariate: dob/age	3.55	3.70	3.80	4.46* 0.28	.014 .60	1-3	.16
Otvorenost prema iskustvu / Openness kovarijanta/covariate: dob/age	3.56	4.02	4.16	24.82** 0.01	.001 .92	1-2 1-3	.37
Generativnost / Generativity kovarijanta/covariate: dob/age	3.53	3.52	3.61	0.45 0.52	.64 .47	-	.05
Optimizam/Optimism kovarijanta/covariate: dob/age	3.18	3.33	3.47	5.28* 3.15	.012 .08	1-3	.16
Tjelesno zdravlje / Physical health kovarijanta/covariate: dob/age	2.93	3.30	3.42	10.03** 0.00	.001 .99	1-2 1-3	.25
Mentalno zdravlje / Mental health kovarijanta/covariate: dob/age	3.62	3.64	3.88	2.36 1.73	.10 .19	-	.12
Zadovoljstvo životom / Life satisfaction kovarijanta/covariate: dob/age	3.76	3.85	3.95	1.13 0.42	.30 .52	-	.08
Zadovoljstvo financijama / Material satisfaction kovarijanta/covariate: dob/age	3.32	3.28	3.34	1.55 4.60*	.23 .03	-	.09
Žaljenje zbog akcija / Life regrets for action kovarijanta/covariate: dob/age	2.73	2.79	2.52	1.32 1.42	.27 .23	-	.09
Žaljenje zbog neakcija / Life regrets – missed opportunities kovarijanta/covariate: dob/age	2.53	2.61	2.63	0.15 0.58	0.12 .45	-	.04

*p<.05; **p<.01

obrazovanjem svoje tjelesno zdravlje ocjenjuju boljim i otvorenije su prema novim iskustvima u odnosu na one s osnovnom i srednjom školom. Rezultati su pokazali da dob kao korelat ne mijenja ustanovljene efekte razine obrazovanja za uspješno starenje te zdravstvene korelate i korelate psihološke dobrobiti uz iznimku zadovoljstva financijama. Stariji su stari zadovoljniji financijama u odnosu na mlađe stare, dok uz kontrolu dobi nema razlike u zadovoljstvu financijama s obzirom na obrazovnu razinu.

RASPRAVA

Brojna istraživanja procesa starenja kao i posebnog aspekta koji se naziva uspješnim starenjem obično su takva da se u njima osobe starije dobi

show that age as a correlate does not alter the observed effects of educational attainment on successful aging, health and correlates of psychological well-being, with the exception of satisfaction with finances. Older people are more satisfied with their finances than younger people, while when controlling for age, there is no difference between those two groups in financial satisfaction in relation to educational level.

DISCUSSION

Numerous studies on the aging process, as well as studies of special construct called “successful aging”, usually treat older people as a single, homogeneous group. However, the facts show that older people are very different from each

često tretiraju kao jedinstvena, homogena skupina. No, činjenice pokazuju da su stare osobe međusobno vrlo različite i da su upravo u tom životnom razdoblju razlike među osobama veće nego u prethodnim razdobljima. Osnovni nalazi ovoga istraživanja daju podršku autorima koji smatraju da se u starosti osobe ne bi trebale tretirati kao jedinstvena, homogena populacija, odnosno potvrđuju važnost i potrebu razmatranja starijih osoba kao heterogenih podskupina.

Kao zdravstvene korelate uspješnoga starenja u ovom smo istraživanju odabrali dvije mjere samoprocjene tjelesnog i mentalnog zdravlja. Muškarci su u našem uzorku (neovisno o dobi) procijenili svoje tjelesno zdravlje značajno boljim negoli žene, a ovakav je nalaz u skladu s rezultatima prethodnih istraživanja koji generalno pokazuju da žene imaju više zdravstvenih problema od muškaraca, nižu razinu funkcionalnih sposobnosti i doživljavaju više boli (38). Očekivano je i da ljudi u funkciji dobi doživljavaju veći broj bolesti odnosno da su lošijeg zdravlja, no ovim istraživanjem nismo potvrdili takav trend. Naime, između starijih i starih osoba ne postoje značajne razlike u samoprocjeni tjelesnog ni mentalnog zdravlja, što ne znači nužno da nisu bolesni. Ovakav nalaz možemo pripisati korištenoj mjeri samoprocjene zdravlja koja se razlikuje od mjera kojima se objektivno bilježi broj bolesti. Zanimljivo je da se subjektivni osjećaj bolesti odnosno zdravlja ne može izjednačiti s brojem bolesti, jer postoje osobe koje se unatoč postojanju određenog broja bolesti, dobro osjećaju i smatraju se dobroga zdravlja (39). Podržavaju to i nalazi istraživanja u kojem se čak 92 % osoba smatralo uspješno starećima, iako je većina imala kronične bolesti (40). Iako smo koristili samo jednu česticu samoprocjene tjelesnog zdravlja, na temelju prethodno provedenih istraživanja (25,26) čini se da je dovoljno osjetljiva u mjerenju razlika među osobama, ako one postoje.

Kao psihološke korelate uspješnoga starenja odabrali smo otvorenost prema iskustvu, gene-

other and that the differences between people at this stage of life are greater than at earlier periods. The main findings of this study support the authors who believe that people in old age should not be treated as a single, homogeneous population or confirm the importance and necessity of considering older people as heterogeneous subgroups.

As health correlates of successful aging, in this study we selected two measures of self-assessed physical and mental health. In our sample (regardless of age), men rated their physical health significantly better than women. This result is consistent with previous research findings that generally show that women have more health problems than men, have lower functional capacity, and experience more pain (38). It was also expected that older people would have more diseases, that is, they would be in poorer health, but this study did not confirm such a trend. Indeed, there are no significant differences in self-assessment of physical or mental health between the younger old and the older old, which does not necessarily mean that they are not ill. This finding can be attributed to the measure of self-assessed health applied, which is different from the measures that objectively record the number of diseases. It is interesting to note that the subjective feeling of illness or health cannot be equated with the number of illnesses, because there are people who feel well and consider themselves healthy despite illnesses (39). This is supported by the results of the study in which as many as 92% of people considered themselves successful in old age, even though most had chronic diseases (40). Although we used only a single question to assess physical health, based on previous research (25,26), it appears to be sensitive enough to capture differences between individuals, if they exist.

We chose openness to experience, generativity, optimism, life satisfaction, financial satisfaction, and life regrets as psychological correlates

rativnost, optimizam, zadovoljstvo životom, zadovoljstvo financijama te životna žaljenja zbog toga što se u nekim prethodnim istraživanjima pokazalo da su te varijable povezane s uspješnim starenjem (9,41-43). Riječ je uglavnom o osobinama ličnosti među kojima su neke često (kao primjerice zadovoljstvo životom), dok su druge rjeđe proučavane. Neke osobine ličnosti kao što je optimizam utječu na dugovječnost i na uspješno starenje tako što ublažavaju djelovanje stresora, bolesti ili poteškoća (44), ali i utječući na socijalnu podršku i prakticiranje zdravih oblika ponašanja (45). Iako nisu uočene spolne i dobne razlike u optimizmu, on je značajan korelat uspješnoga starenja. U našem su istraživanju starije stare osobe bile značajno zadovoljnije svojim financijama od mlađih starih, što bi se moglo objasniti možda time da u funkciji dobi osobe imaju manje potreba koje zadovoljavaju novcem, odnosno imaju manja očekivanja i zadovoljni su s onime što imaju. Stariji stari muškarci su značajno otvoreniji prema novim životnim iskustvima od starijih starih žena (slika 2), što zapravo i ne čudi s obzirom da su tijekom života muškarci i inače otvoreniji novim iskustvima i spremniji na rizike i na upuštanje u nove situacije sukladno muškoj rodnoj ulozi. Međutim, zašto je zabilježen suprotan trend u skupini mlađih starijih kod kojih su žene bile otvorenije novim iskustvima, ostaje otvoreno pitanje. Zanimljivo je da mlade stare žene procjenjuju svoj proces starenja uspješnijim te su generativnije nego mlađi stari muškarci, no stariji stari muškarci su uspješniji i imaju veći osjećaj generativnosti nego starije stare žene. Očito je viša dob u žena povezana s manje uspješnim starenjem, dok se kod muškaraca vjerojatno javlja efekt selektivnog preživljavanja zbog kojeg su najstariji ujedno i najuspješniji, jer su žene te koje su inače puno zastupljenije u najstarijim dobnim skupinama. Stoga muškarci koji prežive do pozne dobi možda zaista imaju neke osobine koje pospješuju uspješno starenje, među njima i generativnost. Što se generativnosti tiče, naši rezultati pokazuju da, barem u skupini starijih

of successful aging because some previous research has shown that these variables are associated with successful aging (9,41,42,43). These are mainly personality traits, some of which have been studied frequently (such as life satisfaction), while others have been studied less frequently. Some personality traits, such as optimism, affect longevity and successful aging by mitigating stressors, illnesses, or difficulties (44), but also by influencing social support and a healthy lifestyle (45). Although no gender or age-related differences were observed in optimism, it is a significant correlate of successful aging. In our study, older people were significantly more satisfied with their finances than younger people, which may be explained by the fact that as people age, they have fewer needs to be met with money, i.e., they have lower expectations and are satisfied with what they have. Older old men are significantly more open to new life experiences than older old women (Figure 2), which is not surprising given that men are more open to new experiences and, in keeping with their male gender role, are more willing to take risks and engage in new situations. However, why the opposite trend was observed in the younger senior group, where women were more open to new experiences, remains an open question. Interestingly, younger older women rate their aging process as more successful and are more generative than younger older men, but older old men are more successful and have a greater sense of generativity than older old women. Obviously, older age in women is associated with less successful aging, while in men it is likely that the effect of selective survival comes into play. As a result, the oldest men who reach this high age are the most successful, since it is women who are in general much more prevalent in the oldest age groups. Therefore, men who survive to old age may actually have some characteristics that promote successful aging, including generativity. Regarding generativity, our results show that, at least in the elderly group, men become more generative with age, whereas

osoba, muškarci s godinama postaju sve generativniji, dok žene vrhunac generativnosti postižu ranije na što vjerojatno utječu razlike u rodnim ulogama. Tako muškarci u starijoj dobi, nakon osamostaljenja djece, postaju bliži ženskoj rodnoj ulozi, tj. brižniji, emocionalno ekspresivniji i usmjereniji na druge, dok se žene, koje su tradicionalno bile orijentirane na obitelj, nakon završetka aktivne roditeljske uloge, više okreću nekim vlastitim interesima i potrebama.

Iako do danas nije zapravo jasno je li uspješno starenje proces ili ishod (46), ovakvi nalazi ukazuju da se uspješno starenje mijenja u funkciji vremena, a takve bi nalaze trebalo dopuniti podacima longitudinalnih istraživanja.

Osim što smo u ovom istraživanju željeli ispitati dobne i spolne razlike u uspješnom starenju i nekim korelatima, jedno istraživačko pitanje odnosilo se i na to razlikuju li se osobe različitog stupnja obrazovanja u uspješnom starenju. S obzirom da su u ovom istraživanju osobe s višom stručnom spremom postizale značajno više rezultate na ljestvici uspješnoga starenja i optimizma u odnosu na osobe s nižom stručnom spremom, te su se pokazale otvorenijima prema iskustvu i boljem tjelesnog zdravlja u odnosu na osobe s nižom i srednjom stručnom spremom, smatramo važnim komentirati dobivene razlike. Iako se u istraživanjima obrazovanje smatra jednom od brojnih sociodemografskih osobina koja je korisna u opisivanju uzorka, čini se da je u kontekstu starenja riječ o mnogo važnijoj varijabli. Naime, proces obrazovanja koji započinje u djetinjstvu, te se proteže adolescencijom, a za neke i tijekom odrasle dobi, očito ostavlja trajne posljedice na mogućnosti i aktivnosti tijekom cijelog života, a efekti se osjećaju i u starosti. Primjerice, viši stupanj obrazovanja povezan je s većim kognitivnim rezervama u starosti (47), a moguće je i da će obrazovanije osobe možda biti sklonije ili otvorenije cijeloživotnom učenju i nakon mirovine, što definitivno doprinosi boljem kognitivnom funkcioniranju. Taj aktivni angažman važna je

women reach the peak of generativity earlier, likely influenced by differences in gender roles. For example, after children have grown up and become independent, older men become closer to the female gender role, i.e., they become more caring, emotionally expressive, and focused on others, whereas women, who were traditionally family-oriented, turn more to their own interests and needs after active parenthood ends.

Although it remains unclear to date whether successful aging is a process or an outcome (46), these findings suggest that successful aging changes over time, but they should be supplemented by data from longitudinal research.

In addition to examining age and gender differences in successful aging and some of their correlates in this study, one of the research questions was whether people with different levels of education differ in successful aging. Having in mind that in this study people with a college education scored significantly higher on the successful aging and optimism scales compared to people with an elementary education and were more open to experience and had better physical health than people with an elementary education, we think it is important to comment on the differences that were obtained. Although education is considered in research as one of the many sociodemographic characteristics useful for describing the sample, it seems that it has a much greater importance in the context of aging. This is because the educational process that begins in childhood and extends through adolescence and, for some, even into adulthood, clearly has lasting effects on opportunities and activities throughout life, and the effects are felt in old age as well. For example, higher levels of education are associated with higher cognitive reserve in old age (47), and it is possible that people with higher levels of education may be more inclined or open to lifelong learning after retirement, which definitely contributes to better cognitive performance. This active engagement is an im-

komponenta uspješnog starenja (48). Ako se stare osobe višeg obrazovanja osjećaju zdravijima moguće je da je do toga došlo zato što su tijekom života obavljale bolje poslove (vezane uz manje zdravstvene rizike), ili zato što su bile bolje plaćene pa su mogle više ulagati u vlastito zdravlje, a možda su upravo zbog višeg obrazovanja imale bolji pristup informacijama i aktivnostima vezanim uz očuvanje zdravlja. Iz svih tih razloga obrazovanje se pokazalo značajnim prediktorom uspješnog starenja u brojnim istraživanjima (3,27-29,40). Generalno gledano, i u ovom se istraživanju razina obrazovanja pokazala važnom varijablom s obzirom da obrazovanije osobe uspješnije stare, boljeg su tjelesnog zdravlja, otvorenije prema novim iskustvima i optimističnije u odnosu na osobe nižeg obrazovanja.

Nedostatci ovog istraživanja svakako se odnose na prigodan uzorak te pretežitu zastupljenost žena u uzorku. Uz to, tu su i mjere samoprocjene te činjenica da je za neke varijable korištena samo jedna čestica. Opravdanje tim zamjerkama nalazimo u onim istraživanjima koja su potvrdila da neke mjere koje imaju samo jednu česticu mogu biti prihvatljive odnosno adekvatne, ako su dobro operacionalizirane (38), što smatramo da smo u ovom istraživanju učinili. Podatci istraživanja jedne čestice kao mjere zadovoljstva životom pokazali su da ona ima zadovoljavajuću konstruktivnu valjanost i pouzdanost, a u usporedbi sa složenim mjerama pokazuje čak i višu povezanost s mjerama općeg psihičkog distresa (49). Uz to, preporučuje se da upitnici koji se primjenjuju u istraživanjima na osobama starije dobi ne budu dugi što također govori u prilog korištenju mjera koje sadrže manji broj čestica ili samo jednu.

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portant component of successful aging (48). If older people with higher education feel healthier, it is possible that they feel this way because they were doing higher ranked jobs in their lives (which were associated with lower health risks) or because they had higher income, so they have been able to invest more in their own health care, and because they have better access to health care-related information and activities because of their higher education. For all these reasons, education has been shown to be an important predictor of successful aging in numerous studies (3,27,28,29,40). In general, education level proved to be an important variable in this study because people with higher educational levels age more successfully, have better physical health, are more open to new experiences, and are more optimistic than people with lower educational levels.

The shortcomings of this study are related to the convenience sample and the predominant representation of women in the sample. In addition, we used self-report measures and captured some variables with single items. We find this justified because earlier studies have confirmed that some single-item measures can be acceptable or appropriate if they are well operationalized (38), which we believe was the case in this study. The results of the study using only a single item as a measure of life satisfaction showed that it had satisfactory construct validity and reliability and showed even higher correlation with measures of general psychological distress compared with more complex measures (49). In addition, it is recommended that questionnaires used in research on older people should not be too long, which also argues for the use of measures that contain fewer or only one item.

CONCLUSION

Despite the limitations mentioned above, we believe that the main findings of this study support notions of those authors who believe that

istraživanjima i radu s osobama starije dobi na primjeren način moraju uvažavati njihova specifična obilježja poput dobi, spola i obrazovnog statusa koji ih čine vrlo različitim podskupinama, a ne jedinstvenom populacijom. Zaključno, ovim smo istraživanjem potvrdili naša početna očekivanja da će mlađi stari biti uspješniji u svom starenju od starijih starih, kao i hipotezu vezanu uz obrazovanje, jer su u ovom uzorku obrazovanije osobe uspješnije starjele. Naša očekivanja o tome da će žene uspješnije starjeti od muškaraca samo su djelomično potvrđena s obzirom da se pojavio značajan efekt dobi i spola zbog čega u mlađoj skupini starih osoba žene uspješnije stare, a u skupini starijih starih muškarci.

research and work with older people must take into account their specific characteristics, such as age, gender, and educational status, which make them a very heterogeneous and not a uniform population. In summary, with this study we have confirmed our initial expectations that younger old people age more successfully than older old people, as well as the hypothesis related to education, because in this sample educated people were more successful in the aging process. Our expectations that women would be more successful than men were only partially confirmed, as there was a significant effect of age and gender that resulted in women being more successful in the younger age group and men in the older age group.

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