Uloga bolesti i samoprocjene zdravlja pri subjektivnom uspješnom starenju

/ The Role of Diseases and Self-Assessed Health in Subjective Successful Ageing

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Ranija istraživanja potvrđuju važnost objektivnog zdravstvenog statusa u kontekstu uspješnog starenja kao sastavnice tog multidimenzionalnog konstrukta ili kao njegovog prediktora ili ishoda. Međutim, nedostaje istraživačkih nalaza o potencijalnoj ulozi subjektivnog zdravstvenog statusa kao medijatora u odnosu objektivnog zdravstvenog stanja i procjene uspješnog starenja. Ovaj se rad bavi ispitivanjem uloge subjektivnog zdravlja i objektivno prisutnih kroničnih bolesti u objašnjenju samoprocjene uspješnog starenja sagledanog kao procesa i kao ishoda. Uzorak uključuje 1006 osoba starije dobi (*M* = 73,7; *SD* = 6,59) iz urbanih i ruralnih sredina u Hrvatskoj. Dobiveni rezultati pokazali su da veći broj bolesti smanjuje vjerojatnost uspješnog starenja, dok je manji broj bolesti povezan s pozitivnijom procjenom vlastitog zdravlja te povoljnijom procjenom uspješnog starenja. Samoprocjena zdravlja djelomično posreduje odnos između kroničnih bolesti i uspješnog starenja, budući da se pokazalo kako kronične bolesti imaju i izravnu i neizravnu vezu sa subjektivnim doživljajem uspješnog starenja putem subjektivnog zdravstvenog statusa. Rezultati potvrđuju da bolji objektivni zdravstveni status doprinosi povoljnijoj samoprocjeni vlastitog procesa starenja, ali je taj učinak puno jači kada se ostvaruje posredstvom subjektivne procjene zdravlja. Ovakvi nalazi ukazuju na ključnu ulogu subjektivnog zdravstvenog statusa u kontekstu utjecaja zdravlja na subjektivno uspješno starenje. Intervencije usmjerene na povoljniju percepciju vlastitog zdravlja mogle bi pridonijeti uspješnijoj percepciji vlastitog procesa starenja čak i pri postojanju objektivnih zdravstvenih problema.

/ Previous studies have confirmed the importance of objective health status in the context of successful ageing (SA), either as a component of this multidimensional construct or as its predictor or outcome. However, there is a lack of research on the potential role of subjective health status as a mediator in the relationship between objective health status and the assessment of successful ageing. This paper examines the role of subjective health and objectively present chronic diseases in explaining the self-assessment of successful ageing, viewed both as a process and as an outcome. The sample included 1006 elderly individuals (M = 73.7; SD = 6.59) from urban and rural areas in Croatia. The obtained results showed that a higher number of diseases reduces the likelihood of successful ageing, while a lower number of diseases is associated with a more positive assessment of one's own health, and a more favorable assessment of successful ageing. Self-assessed health partially mediates the relationship between chronic diseases and successful aging, as chronic diseases have both a direct and indirect connection with the subjective experience of successful ageing through subjective health status. The

results confirmed that better objective health status contributes to a more favorable self-assessment of one's own ageing process, but this effect is also much stronger when achieved through subjective health assessment. These findings indicate a key role of subjective health status in the context of health impacting subjective successful ageing. Interventions aimed at fostering a more favorable perception of one's own health could contribute to a more successful perception of one's own ageing process, even in the presence of objective health problems.

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UVOD

Uspješno starenje (US) multidimenzionalni je konstrukt koji je intenzivno proučavan u posljednja četiri desetljeća kako bi se odgovorilo na pitanje kako osobe mogu uspješno starjeti. US je prvo konceptualiziran kao iskustvo zadovoljstva životom (1), no zatim je dugo taj koncept kao kriterij za US napušten i zamijenjen biomedicinskim. U istraživačkom je smislu upravo biomedicinski model US Rowe i Kahna (2) postao jedan od najutjecajnijih, a prema tom modelu čak su dvije od tri komponente koje ga čine povezane s bolestima odnosno zdravljem. Prva komponenta odnosi se na odsutnost bolesti ili malu vjerojatnost obolijevanja i nastanka funkcionalnog ograničenja, dok druga uključuje održavanje tjelesnog funkcioniranja na visokoj razini. Važnost biomedicinskog modela u povijesti istraživanja uspješnog starenja zorno nam pokazuju podatci dviju provedenih meta-analiza koje su uključivale radove o US objavljene u razdoblju između 1978. i 2005. (3) te između 1979. i 2011. (4), a koje su pokazale da je 90 % radova u prvom razdoblju i 92 %

INTRODUCTION

Successful ageing (SA) is a multidimensional construct that has been intensively studied over the past four decades in order to address the question of how people can age successfully. SA was initially conceptualized as an experience of life satisfaction (1), however for a long time this concept was abandoned as a criterion for SA, and was replaced by a biomedical perspective. In research, the biomedical model of SA by Rowe and Kahn (2) became one of the most influential models, and according to this model, as many as two of its three components are related to diseases, i.e. health. The first component refers to the absence of disease, or a low probability of disease and of developing functional limitations, while the second involves maintaining physical functioning at a high level. The importance of the biomedical model in the history of successful ageing research is clearly demonstrated by data from two meta-analyses, which included papers on SA published between 1978 and 2005 (3), and between 1979 and 2011 (4). These showed that 90% of the papers published in the first period

istraživanja u drugom analiziranom razdoblju koristilo upravo taj model. Takvi podatci ukazuju da se gotovo sva dosadašnja znanja o US temelje na biomedicinskom modelu prema kojem je izostanak bolesti temeljni preduvjet uspješnog starenja.

Ovaj je model utjecao na značajan broj istraživanja ali i doživio kritike jer je ukazivao da US nije moguć u prisutnosti kroničnih bolesti (4,5). Unatoč takvim kritikama i u drugim, kasnije razvijenim modelima neki su se autori usmjeravali samo na bolest kao na jednu od dimenzija US, a drugi na funkcionalnu sposobnost. Tako primjerice u modelu Younga i sur. (6) fiziološka komponenta uključuje samoprocjenu kroničnih bolesti i funkcionalnih ograničenja, dok model Pruchna i sur. (7) sadrži dimenziju tjelesne bolesti i tjelesnog funkcioniranja kao objektivne komponente uspješnosti u procesu starenja. Vahia i sur. (8) razvili su dimenzionalni model US koji uključuje tjelesno/opće funkcioniranje kao jednu od pet postojećih dimenzija.

Značajno drugačiji, ali također vrlo utjecajan model US, koji su razvili Baltes i Baltes (9), ne uključuje bolesti jer su autori naglašavali tezu da su tjelesne promjene i gubitci neizbježni u procesu starenja te da osobe biraju i koriste strategije (selekcije, kompenzacije i optimizacije) kako bi se prilagodile tim promjenama. Uz to, dobro tjelesno funkcioniranje samo po sebi ne isključuje nužno postojanje bolesti s obzirom na činjenicu da neke osobe mogu dobro funkcionirati čak i uz kronične bolesti. Iako je glavni fokus istraživanja u području uspješnog starenja bio kako sačuvati zdravlje i funkcionalnu sposobnost u kasnijem životu, istraživanja konzistentno pokazuju da broj kroničnih bolesti raste u funkciji dobi i da mnoge starije osobe imaju jednu ili više bolesti. Primjerice, istraživanje koje su proveli Boersma i sur. (10) pokazuje da u populaciji starijoj od 65 godina većina osoba (63 %) ima jednu ili dvije kronične bolesti, dok pre-

and 92% of the studies conducted in the second analyzed period used this model. Such data indicate that almost all previous knowledge about SA was based on the biomedical model, according to which the absence of disease is the fundamental prerequisite for successful ageing.

This model influenced a significant number of studies, but was also criticized for suggesting that SA was not possible in the presence of chronic diseases (4, 5). Despite such criticisms, and in other models that were developed later, some authors focused only on disease as one of the dimensions of SA, while others focused on functional ability. For example, in the model of Young et al. (6) the physiological component included the self-assessment of chronic diseases and functional limitations, while the model presented by Pruchno et al. (7) contained the dimensions of physical illness and physical functioning as objective components of success in the ageing process. Vahia et al. (8) developed a dimensional model of SA that included physical/general functioning as one of five existing dimensions.

A significantly different, but also very influential model of SA, was developed by Baltes and Baltes (9), and did not include disease, since the authors emphasized that physical changes and losses were inevitable in the ageing process, and that individuals choose and use strategies (selection, compensation and optimization) to adapt to these changes. In addition, good physical functioning does not necessarily exclude the presence of disease, given that some individuals can function well even with chronic diseases. Although the main focus of research in the field of successful ageing has been on how to preserve health and functional ability in later life, studies have consistently shown that the number of chronic diseases increases with age and that many elderly people suffer from one or more diseases. For example, the study conducted by Boersma et al. (10) showed that in the population of people over the age of 65, the majority (63%) have one or two chronic

ma istraživanju koje je proveo *The National Council on Aging* (NCOA) čak 94,9 % starijih od 60 ima najmanje jednu kroničnu bolest, a 78,7 % dvije ili više (11). Iako su kronične bolesti učestale u starijoj dobi, istraživanja pokazuju da je moguće uspješno starjeti i uz bolesti. Young i sur. (6) smatraju da US može koegzistirati s kroničnim bolestima i stanjima koja proizlaze iz funkcionalnog ograničenja. Takvu tezu podržavaju i istraživanja koja se bave specifičnim bolestima te primjerice pokazuju da kronična osteoartroza ne sprječava starije osobe da uspješno stare (12), kao niti dijabetes (13). Među strategijama koje osobe s dijabetesom koriste nalazi se usporedba sebe s prijateljima i članovima obitelji koji imaju neku kroničnu bolest, kao i skrb o drugima, a sve ih to motivira da ostanu uključeni u život i doprinosi njihovom osjećaju dobrobiti. Stare osobe s kroničnim plućnim bolestima koriste se strategijama selekcije, optimizacije i kompenzacije kako bi se suočile s funkcionalnim padom vlastitih sposobnosti (14). Ako većina osoba starije dobi, kao što to konzistentno pokazuju podatci istraživanja, ima neku bolest, a mnogi od njih uz to uspješno stare, zanimljivo je pitanje može li zdravlje uopće biti dimenzija uspješnog starenja?

Djelomičan odgovor na ovo pitanje daju nam rezultati međunarodnog istraživanja (15) u kojem su autori provjeravali doprinos tjelesnog zdravlja objektivnom i subjektivnom uspješnom starenju te utvrdili da je US povezan s manje kroničnih bolesti i manje problema s dnevnim aktivnostima. Zanimljivo je da nije utvrđena povezanost s tjelesnim disfunkcijama (kao objektivnim mjerama zdravlja) što bi moglo ukazivati na to da je instrument koji je u ovom istraživanju korišten za mjerenje objektivnog US previše restriktivan, odnosno veza US i bolesti ovisi i o upotrijebljenim parametrima zdravlja.

Osim postojanja samog oboljenja, važan je i način na koji osobe percipiraju i procjenjuju

diseases, while according to a study conducted by the National Council on Aging (NCOA), as many as 94.9% of people above 60 have at least one chronic disease, and 78.7% have two or more (11). Although chronic diseases are common in older age, research shows that it is possible to age successfully even in the presence of disease. Young et al. (6) observed that SA could coexist with chronic diseases and conditions resulting from functional limitations. This view was also supported by studies focusing on specific diseases, for example, showing that chronic osteoarthritis does not prevent elderly people from ageing successfully (12), and neither does diabetes (13). Strategies used by individuals with diabetes include comparing themselves with friends and family members who have a chronic disease, as well as caring for others, all of which motivates them to stay involved in life and contributes to their sense of well-being. Elderly people with chronic lung diseases use strategies of selection, optimization and compensation to face the functional decline of their own abilities (14). If the majority of elderly people, as research data consistently show, have some type of disease, and many of them also age successfully, the interesting question arises as to whether health can even be a dimension of successful ageing.

A partial answer to this question was provided by the results of an international study (15) in which the authors examined the contribution of physical health to objective and subjective successful ageing, and found that SA is associated with fewer chronic diseases and fewer problems with daily activities. Interestingly, no connection with physical dysfunctions (as objective measures of health) was established, which could indicate that the instrument used in this study to measure objective SA was too restrictive, i.e. that the connection between SA and disease depends on the health parameters used.

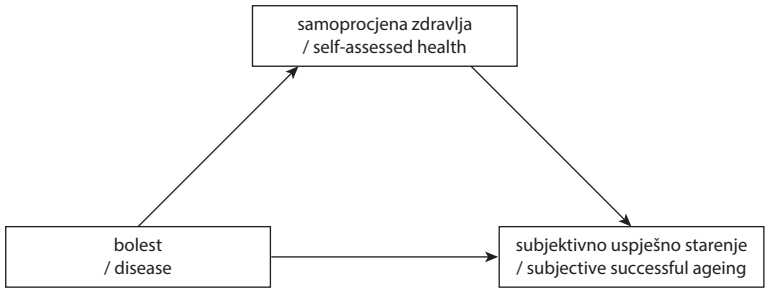
In addition to the presence of a disease itself, the way people perceive and evaluate their

svoje zdravlje koje se mijenja tijekom vremena. Percepcija boljeg zdravlja ima pozitivne učinke na US (16). U ponovljenom križno-sekvencijalnom istraživanju na kohorti starijih ljudi provedenom od 1989. do 2019. (17) utvrđena je pozitivna povezanost između percipiranog zdravlja i uspješnog starenja. Ovaj odnos je zabilježen i u drugim istraživanjima (18,19). Flood (20) smatra da pozitivna percepcija vlastitog zdravlja dovodi do toga da se ljudi osjećaju ugodnije u procesu suočavanja s tjelesnim promjenama koje se javljaju tijekom starenja. Čini se da je dobra percepcija zdravlja kod starijih osoba jedan od čimbenika koji smanjuju rizik od smrtnosti i/ili invaliditeta (16). Percipirano zdravstveno stanje nije samo povezano s uspješnim starenjem, već je i jedan od čimbenika koji nam može pomoći da razumijemo kako ljudi upravljaju svojom bolešću i postižu pozitivne rezultate. Kako bi se zdravlje preoblikovalo kao sastavnica uspješnog starenja Carver i Buchanan (21) sugeriraju da bi budući modeli istraživanja morali uključivati ne-biomedicinske konstrukte poput uključenosti, optimizma, samopoštovanja, otpornosti, duhovnosti.

Iako postoje dokazi o uspješnom starenju kod starijih osoba koje imaju neke kronične bolesti ili invaliditete, nije istražena specifična uloga ili mehanizam kojim bolest utječe na uspješno starenje. Na temelju dosadašnjih spoznaja čini se da uspješno starenje ne ovisi samo o objektivnom zdravstvenom stanju, već i o načinu na koji pojedinci doživljavaju i procjenjuju vlastito zdravlje. Stoga je cilj ovog istraživanja ispitati mogućnost da odnos između bolesti i uspješnog starenja bude djelomično ili u potpunosti određen procjenom subjektivnog zdravstvenog stanja. Pretpostavlja se da veći broj bolesti (slika 1) pridonosi nižoj razini uspješnog starenja, dok pozitivnija samoprocjena zdravlja može ublažiti taj odnos djelujući kao posrednički čimbenik između objektivnog i subjektivnog uspješnog starenja.

health, which changes over time, is also important. The perception of better health has positive effects on successful ageing (16). In a repeated cross-sectional study on a cohort of elderly people, which was conducted from 1989 to 2019 (17), a positive correlation was found between perceived health and successful ageing. This relation has also been observed in other studies (18, 19). Flood (20) believed that a positive perception of one's own health enables people to feel more comfortable in the process of coping with the physical changes that occur during ageing. Good health perceptions in elderly people appear to be among the factors which reduce the risk of mortality and/or disability (16). Perceived health status is not only associated with successful ageing, but is also one of the factors that can help us understand how people manage their disease and achieve positive outcomes. In order to reframe health as a component of successful ageing, Carver and Buchanan (21) suggested that future research models should include non-biomedical constructs such as involvement, optimism, self-esteem, resilience, and spirituality.

Although there is evidence of successful ageing in elderly people suffering from some chronic diseases or disabilities, the specific role or mechanism by which diseases influence successful ageing has not yet been investigated. Based on the current knowledge, it appears that successful ageing depends not only on the objective health status, but also on how individuals experience and assess their own health. Therefore, the aim of this study was to examine the possibility that the relationship between disease and successful ageing is partially or completely determined by the assessment of subjective health status. It is assumed that a higher number of diseases (Figure 1) contributes to a lower level of successful ageing, while a more positive self-assessment of health could moderate this relationship, acting as a mediating factor between objective and subjective successful ageing.



SLIKA 1. Medijacijski model uloge samoprocjene zdravlja u odnosu između bolesti i uspješnog starenja
FIGURE 1. The mediation model of the role of self-assessed health in the correlation between diseases and successful ageing

METODA

Sudionici

Uzorak istraživanja čini 1006 starijih osoba (59,1 % žena i 40,9 % muškaraca) koji su izabrani uz pomoć autora rada, studenata i vanjskih stručnjaka anketara. Prosječna dob uzorka iznosila je *M* = 73,7 (*SD* = 6,59) godina, dok se njihova dob kretala od 65 do 98 godina. Oko dvije trećine ispitanika (62,2 %) bili su u braku i živjeli su u vlastitom domu sa supružnikom (42,6 %), djetetom (21,5 %) ili supružnikom i djetetom (10,8 %), dok je jedna četvrtina u vrijeme provedbe istraživanja živjela sama. Među sudionicima mnogi su bili obrazovani na razini srednje (44,4 %), više ili visoke škole (23 %) i uglavnom su živjeli u gradu (60,9 %).

Instrumenti

Demografskim upitnikom prikupljene su informacije o dobi, spolu, obrazovanju, bračnom statusu, mjestu življenja i uvjetima stanovanja.

Subjektivno uspješno starenje (SUS) mjereno je pomoću dviju grafičkih ljestvica (7) po modelu koji su predložili autori. Od sudionika je traženo da procijene: koliko uspješno su ostarjeli (mjera US kao ishoda) te koliko dobro stare (mjera US kao procesa) pomoću dviju ljestvica samoprocjene od 11 stupnjeva od 0 (*nimalo uspješno / vrlo loše*) do 10 (*izuzetno uspješno / izvrsno*). Ukupan rezultat za samoprocjenu

METHOD

Participants

The research sample comprised a total of 1006 elderly people (59.1% women, 40.9% men) who were recruited with the assistance of the authors, students and external expert interviewers. The mean age of the sample was *M* = 73.7 years (*SD* = 6.59), with ages ranging from 65 to 98 years. Approximately two thirds of the respondents (62.2%) were married and lived in their own home with a spouse (42.6%), child (21.5%), or spouse and child (10.8%), while one quarter lived alone at the time of the study. Many participants had completed secondary school education (44.4%), or college or university (23%), and most of them lived in a city (60.9%).

Instruments

A demographic questionnaire was used to collect the information on age, gender, education, marital status, place of residence, and housing conditions.

Subjective successful aging (SSA) was measured using two graphical scales (7), following the model proposed by the authors. The participants were asked to rate how successfully they had aged (measure of SA as an outcome), and how well they were ageing (measure of SA as a process) using two 11-point self-rating scales ranging from 0 (*not at all successfully/very poorly*) to 10 (*very successfully/excellent*). The total

TABLICA 1. Sociodemografske osobine sudionika (N = 1006)
TABLE 1. Sociodemographic characteristics of the participants (N = 1006)

Varijable / Variables		M (SD)
Dob / Age		73,7 (6,59)
	Kategorija / Category	*N (%)*
Spol / Gender	Muški / Male	411 (40,9)
	Ženski / Female	595 (59,1)
Obrazovanje / Education	Nedovršena osnovna škola / Incomplete elementary school	108 (10,7)
	Završena osnovna škola / Completed elementary school	220 (21,9)
	Srednja škola / High school	446 (44,4)
	Viša ili visoka škola / College or university	231 (23)
Bračni status / Marital status	Samci / Single	22 (2,2)
	U braku / Married	626 (62,2)
	Suživot / Cohabitation	12 (1,2)
	Razvedeni / Divorced	52 (5,2)
	Udovci/udovice / Widowers/widows	294 (29,2)
Mjesto prebivanja / Place of residence	Grad / City	612 (60,9)
	Manji grad ili mjesto / Smaller town or settlement	187 (18,6)
	Selo / Village	206 (20,5)
Uvjeti stanovanja / Housing conditions	Živi sam / Living alone	235 (23,4)
	Živi s bračnim drugom / Living with a spouse	429 (42,6)
	S djecom / With children	216 (21,5)
	S bračnim drugom i djecom / With spouse and children	109 (10,8)
	U široj obitelji / With extended family	17 (1,7)

US izračunat je kao zbroj odgovora na ova dva pitanja.

Samoprocjena zdravlja (SZ) – sudionici su procjenjivali svoje opće zdravlje na jednoj čestici pomoću ljestvice od pet stupnjeva od 1 (*loše*) do 5 (*izvrsno*).

Kronične bolesti – podatci o bolestima prikupljani su tako što smo pitali sudionike: „Da li vam je liječnik ikada rekao da imate: artritis, visoki tlak, bolest srca, rak, dijabetes, osteoporozu, moždani udar i bolest pluća?“. U analizama je korišten ukupan broj bolesti za koje su sudionici potvrdili da od njih boluju.

Postupak

Podatci prikazani u ovom radu prikupljeni su u sklopu dva istraživačka projekta o uspješnom starenju (*Uspješno starenje: Razvoj i validacija integriranog multidimenzionalnog modela*

score for self-rated SA was calculated as the sum of the responses to these two questions.

Self-assessment of health (SAH) – the participants rated their general health on a single item using a five-point scale ranging from 1 (*poor*) to 5 (*excellent*).

Chronic diseases – the data on diseases were collected by asking participants the following questions: “Has your doctor ever told you that you have: arthritis, high blood pressure, heart disease, cancer, diabetes, osteoporosis, stroke, or a lung disease?”. The total number of diseases that the participants confirmed they were suffering from was used in the analyses.

Procedure

The data presented in this paper were collected as part of two research projects on successful ageing: “Successful Ageing: Development and

(IP.01.2021.21, financiranog sredstvima Sveučilišta u Zadru) i *Medijacijski i moderatorski modeli uspješnog starenja* (ffpu-1-2023-3, Sveučilišta Juraj Dobrila u Puli). Svi su podatci prikupljeni putem izravnih intervjua s osobama u njihovim domovima nakon dobivanja usmenog pristanka za sudjelovanje u istraživanju. Pitanja koja su se odnosila na ključne konstrukte u ovome radu bila su ista u oba projekta, a uzorak se širio metodom snježne grude. Postupak prikupljanja podataka odvijao se u razdoblju od studenog 2021. do veljače 2022. na prvom, te od veljače do lipnja 2023. na drugom projektu. Sudionici su kontaktirani individualno i nakon usmenog pristanka dogovaran je termin ispunjavanja upitnika u njihovim domovima. Podatke su prikupljali istraživači na projektu te educirane studentice i studenti. U prvom koraku uključili su svoje djedove i bake, te susjede starije dobi, a zatim su zamolili da ih upute na svoje prijatelje i poznanike koji bi se mogli uključiti u istraživanje. Pri istraživanju sudionicima je osigurana anonimnost i nisu bilježeni osobni podatci o imenu i prezimenu ili bilo koji drugi podatak koji bi omogućio identifikaciju. Svi su upitnici kodirani i pristup tim podatcima imali su isključivo istraživači projektnih timova. Istraživanjem su obuhvaćene starije osobe iz 19 hrvatskih županija, većinom dalmatinskih, Grada Zagreba te Istarske županije. Provedba istraživanja u okviru dvaju projekata odobrena je od nadležnih etičkih povjerenstava dvaju sveučilišta pri kojima su projekti realizirani (Br. Odluka: 114-06/21-01/22 i 2023_29).

Validation of an Integrated Multidimensional Model" (IP.01.2021.21, funded by the University of Zadar) and "Mediation and Moderator Models of Successful Ageing" (ffpu-1-2023-3, Juraj Dobrila University of Pula). All data were collected through direct interviews with individuals in their homes, after obtaining verbal consent to participate in the study. The questions related to the key constructs in this paper were the same in both projects, and the sample was expanded using snowball sampling. The data were collected in the period from November 2021 to February 2022 in the first project, and from February to June 2023 in the second project. The participants were contacted individually and, after providing verbal consent, an appointment was arranged for them to complete the questionnaire in their homes. The data were collected by the project researchers and trained students. In the first step, they included their grandparents and elderly neighbors, after which they asked them to refer their friends and acquaintances who could participate in the study. In the course of the study, the participants were assured anonymity, and no personal information such as name, surname, or any other identifying detail was recorded. All the questionnaires were coded, and only project team researchers had access to these data. The study included elderly people from 19 Croatian counties, mostly Dalmatian counties, the City of Zagreb, and Istria County. The implementation of the study within the framework of the two projects was approved by the relevant Ethics Committees of the two universities where the projects were conducted (Decision numbers: 114-06/21-01/22 and 2023_29).

REZULTATI

Frekvencije osam pojedinih skupina bolesti za cijeli uzorak te posebno za muškarce i žene prikazane su u tablici 2., dok je ukupan broj bolesti prikazan u tablici 3. Hi-kvadrat test pokazao je postojanje značajnih spolnih razlika samo za dvije skupine bolesti i to artritis i osteoporozu

RESULTS

The frequencies of the eight individual groups of diseases for the entire sample, as well as separately for men and women, are presented in Table 2, while the total number of diseases is presented in Table 3. The chi-square test indicated significant gender differences for two disease

TABLICA 2. Učestalost kroničnih bolesti osoba u starijoj životnoj dobi
TABLE 2. The incidence of chronic diseases in elderly people

	M N (%)	Ž / F N (%)	Ukupno / Total %	χ^2 df = 1	p
Hipertenzija / Hypertension	228 (55,5)	365 (61,3)	58,9	3,46	0,06
Kronične bolesti srca / Chronic heart disease	125 (30,4)	165 (27,7)	28,8	0,85	0,36
Osteoporoza / Osteoporosis	21 (5,1)	166 (27,9)	18,6	83,43	0,001
Artritis / Arthritis	47 (11,4)	133 (22,4)	18	20,53	0,001
Dijabetes / Diabetes	69 (18,6)	104 (17,5)	17,2	0,08	0,80
Rak / Cancer	38 (9,2)	44 (7,4)	8,2	1,11	0,29
Kronične plućne bolesti / Chronic lung disease	26 (6,3)	35 (5,9)	6,1	0,08	0,77
Moždani udar / Stroke	22 (5,4)	25 (4,2)	4,7	0,72	0,45

Napomena. M = muški spol; Ž = ženski spol
/ *Note*. M = male; F = female

TABLICA 3. Ukupan broj kroničnih bolesti kod osoba u starijoj životnoj dobi (N = 1006)
TABLE 3. Total number of chronic diseases among the elderly (N = 1006)

Broj kroničnih bolesti / Number of chronic diseases	M %	Ž / F %	Ukupno %
0	22,1	14,6	17,7
1	37,7	33,9	35,5
2	24,1	26,1	25,2
3	11,4	16,3	14,3
4	3,6	6,6	5,4
5	0,5	1,7	1,2
6	0,5	0,7	0,6
7	-	0,2	0,1

Napomena. M = muški spol; Ž = ženski spol
/ *Note*. M = male; F = female

koje su češće kod žena nego muškaraca. Oko jedne trećine osoba starije dobi ima jednu kroničnu bolest, a jedna četvrtina ima dvije. Zanimljivo je da 17,7 % starih osoba nema niti jedno kronično oboljenje, a 21,6 % ima od tri do sedam.

Kako bi se provjerila medijacijska uloga samoprocjene zdravlja u odnosu broja bolesti i uspješnog starenja provedena je medijacijska analiza koristeći dodatak PROCESS macro u programu SPSS IBM (verzija 22; 22). Za provjeru značajnost izravnog učinka, korišten je 95% intervali pouzdanosti (*LLCI* = donja granica intervala; *ULCI* = gornja granica intervala) dobiven na temelju metode samoiz-

groups only, namely arthritis and osteoporosis, which appear more commonly in women than in men. Approximately one third of the elderly had one chronic disease, and one quarter had two. Notably, 17.7% of the elderly had no chronic diseases, while 21.6% had between three and seven.

In order to test the mediating role of the self-assessment of health between the number of diseases and successful ageing, a mediation analysis was conducted using the PROCESS macro plugin in the IBM SPSS program (version 22; 22). In order to assess the significance of the direct effect, a 95% confidence interval was used (LLCI = lower bound of the interval; ULCI = upper bound of the interval), obtained based

vlačenja (engl. *bootsrapping*) s 5000 uzoraka. Preliminarne analize su pokazale da u bazi nedostaje samo 1 podatak sudionika na varijabli obrazovanja. Detektirana je 21 odstupajuća vrijednost ($z < |3{,}29|$): pet vrijednosti na varijabli dob, sedam vrijednosti na varijabli broj bolesti i devet vrijednosti na varijabli uspješno starenje. S obzirom da su sve vrijednosti bile u očekivanom rasponu korištenih varijabli uključene su u daljnju analizu. Deskriptivna statistika korištenih varijabli prikazana je u tablici 4.

Povezanost korištenih varijabli prikazana je u tablici 5. iz koje se može vidjeti da su s kriterijskom varijablom uspješnog starenja (koja je izražena pomoću kompozita US kao procesa i kao ishoda) statistički značajno povezane varijable obrazovanje, broj bolesti i samoprocjena zdravlja, odnosno, više obrazovanje, manji broj bolesti i veća samoprocjena zdravlja povezani su s višom percepcijom uspješ-

on the bootstrapping method with 5000 samples. Preliminary analyses showed that only one participant's data on the education variable was missing in the database. Twenty-one outliers ($z < |3.29|$) were identified: five values in the age variable, seven values in the number of diseases variable, and nine values in the successful ageing variable. Since all values were within the expected range of the variables used, they were included in further analysis. Descriptive statistics for the variables used are presented in Table 4.

The correlation between the variables used is presented in Table 5, showing that the variables of education, number of diseases and self-assessment of health are all statistically significantly correlated with the criterion variable of successful ageing (expressed using the SA composite as a process and as an outcome). Specifically, higher education, fewer diseases, and a higher self-assessment of health are associated with a higher perception of successful ageing.

TABLICA 4. Deskriptivna statistika dobi, broja bolesti, samoprocjene zdravlja i percepcije uspješnog starenja (N = 1006)
TABLE 4. Descriptive statistics of age, number of diseases, self-assessed health, and perception of successful ageing (N = 1006)

Varijabla / Variable	M	SD	min	max
Dob / Age	73,72	6,59	65	98
Broj bolesti / Number of diseases	1,61	1,22	0	7
Samoprocjena zdravlja / Self-assessed health	3,30	0,80	1	5
Uspješno starenje / Successful ageing	14,60	3,61	0	20

TABLICA 5. Povezanost između sociodemografskih i zdravstvenih obilježja, samoprocjene zdravlja i uspješnog starenja (N = 1006)
TABLE 5. Correlation between sociodemographic and health-related characteristics, self-assessed health, and successful ageing (N=1006)

	Spol / Gender	Obrazovanje / Education	Dob / Age	Broj bolesti / Number of diseases	Samoprocjena zdravlja / Self-assessed health	Uspješno starenje / Successful ageing
Spol / Gender	1					
Obrazovanje / Education	-0,25**	1				
Dob / Age	0,01	-0,15**	1			
Broj bolesti / Number of diseases	0,14	-0,20**	0,17**	1		
Samoprocjena zdravlja / Self-assessed health	-0,06	0,21**	-0,17**	-0,42**	1	
Uspješno starenje / Successful ageing	-0,03	0,11**	0,04	-0,25**	0,51**	1

Napomena. **p < 0,01. Za varijable spol i obrazovanje korišten je Spearmanov koeficijent korelacije
/ *Note.* **p < 0.01. Spearman's correlation coefficient was used for the variables of gender and education

nog starenja. Samoprocjena zdravlja također je povezana s brojem bolesti i obrazovanjem, ali i s dobi. Više obrazovanje, mlađa životna dob i manji broj bolesti povezani su s višom samoprocjenom zdravlja. Na kraju, broj bolesti pokazao se povezanim s obrazovanjem i dobi. Niže obrazovanje i viša životna dob povezani su s većim brojem bolesti. S obzirom na značajnu povezanost demografskih varijabli spola, dobi i obrazovanja s nekim od ključnih konstrukata, utjecaj ovih demografskih varijabli je u kasnijoj medijacijskoj analizi kontroliran.

Rezultati analize modela medijacije prikazani su u tablici 6. i na slici 2. Ukupni učinak bro-

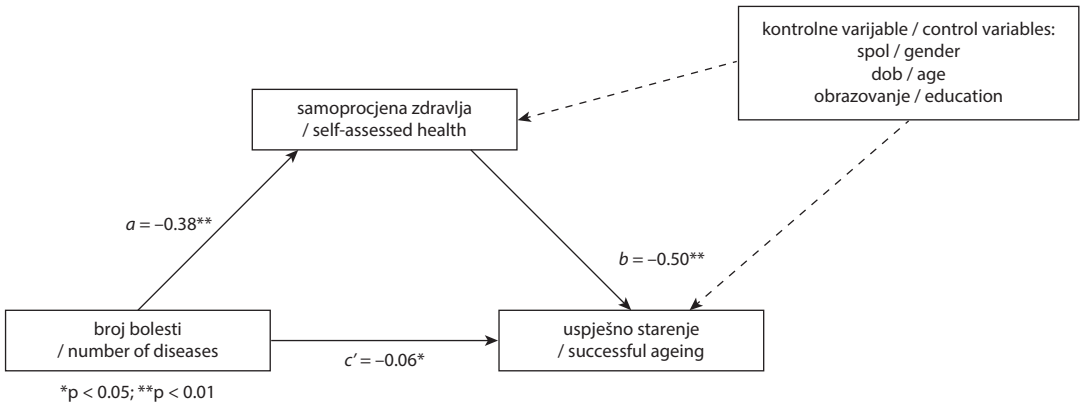
The self-assessment of health is also associated with the number of diseases, education and age. Higher education, younger age, and fewer diseases are associated with a higher self-assessment of health. Finally, the number of diseases was proved to be associated with education and age. Lower education and older age are associated with a higher number of diseases. Given the significant correlation between the demographic variables of gender, age and education with some of the key constructs, the influence of these demographic variables was controlled for in the subsequent mediation analysis.

The results of the mediation model analysis are presented in Table 6 and Figure 2. The overall

TABLICA 6. Testirani medijacijski model odnosa između broja bolesti i percepcije uspješnog starenja (N = 1005)
TABLE 6. Tested mediation model of the association between the number of diseases and the perception of successful ageing (N = 1005)

Prediktori / Predictors	Samoprocjena zdravlja / Self-assessed health			Uspješno starenje / Successful ageing		
	b	*SE*	*p*	*b*	*SE*	*p*
Broj bolesti / Number of diseases	-0,25	0,02	<0,001	- 0,18	0,09	0,04
Samoprocjena zdravlja / Self-assessed health	-	-	-	2,27	0,14	<0,001
Spol / Gender	0,04	0,05	0,43	0,06	0,20	0,76
Dob / Age	-0,01	0,004	0,004	0,07	0,02	<0,001
Obrazovanje / Education	0,11	0,03	<0,001	0,04	0,11	0,70
Konstanta / Constant	4,08	0,30	<0,001	1,81	1,38	0,19
	R^2 = 0,20 F (4, 1000) = 61,19; p <0,01			R^2 = 0,28 F (5, 999) = 76,72; p <0,01		

Napomena. Konstanta = očekivana vrijednost kriterija kada prediktor iznosi nula
/ *Note.* Constant = expected value of the criterion when the predictor is zero



SLIKA 2. Prikaz standardiziranih koeficijenata medijacijskog modela između broja bolesti, samoprocjene zdravlja i uspješnog starenja uz kontrolu spola, dobi i obrazovanja (N = 1005)
FIGURE 2. Presentation of the mediation model standardized coefficients between the number of diseases, self-assessed health and successful ageing while controlling for gender, age and education (N = 1005)

ja bolesti na percepciju uspješnog starenja je značajan (c = –0,75, SE = 0,09; p < 0,01, $LLCI$ = -0,93, $ULCI$ = -0,57), kao i njegovi izravni (c' = –0,18, SE = 0,09; p = 0,04, $LLCI$ = -0,36, $ULCI$ = -0,01) i neizravni učinci (c = –0,56, SE = 0,06, $LLCI$ = -0,68, $ULCI$ = -0,46). Osobe koje su imale veći broj bolesti imale su nižu percepciju uspješnog starenja. Također, osobe s većim brojem bolesti ujedno su slabije procjenjivale svoje zdravlje. Niža samoprocjena zdravlja predviđala je i nižu percepciju uspješnog starenja. Pokazalo se da je neizravni učinak broja bolesti, putem samoprocjene zdravlja, na samoprocjenu uspješnog starenja jači u odnosu na njegov izravni učinak na US.

RASPRAVA

Ovo je istraživanje provedeno na velikom uzorku osoba starije životne dobi koje žive u Hrvatskoj kako bi se ispitao odnos između objektivnog zdravstvenog statusa operacionaliziranog putem broja kroničnih bolesti, subjektivne procjene zdravlja i samoprocjene uspješnog starenja. S obzirom na važnost zdravlja za kvalitetu života jasno je zbog čega se ono pojavljuje kao dimenzija u mnogim modelima uspješnog starenja od onih ranijih (2) do nove generacije multidimenzionalnih i holističkih modela (6,8,23,24,26). U skladu s preporukom (27) da je u istraživanjima potrebno uključiti kako objektivne tako i subjektivne mjere US, odlučili smo u ovom radu operacionalizirati zdravlje na oba načina. Kao objektivnu mjeru zdravlja koristili smo popis osam skupina kroničnih bolesti koje je utvrdio liječnik, dok je kao subjektivna mjera korištena samoprocjena zdravlja. Iako su te dvije mjere značajno povezane, pretpostavlja se da njihova uloga u kontekstu US može biti različita. Narušeno objektivno zdravlje tretira se često kao pokazatelj manje uspješnog starenja unutar multidimenzionalnih modela US (6,8,23-25) ili kao negativni prediktor ili korelat uspješnog starenja. Međutim, pokazalo se

effect of the number of diseases on the perception of successful ageing is significant (c = –0.75, SE = 0.09; p < 0.01, $LLCI$ = -0.93, $ULCI$ = -0.57), as are its direct (c' = –0.18, SE = 0.09; p = 0.04, $LLCI$ = -0.36, $ULCI$ = -0.01) and indirect effects (c = –0.56, SE = 0.06, $LLCI$ = -0.68, $ULCI$ = -0.46). In individuals with a higher number of diseases the perception of successful ageing was lower. In addition, people with a higher number of diseases also rated their health more poorly. Lower self-assessed health predicted lower perceptions of successful ageing. The indirect effect of the number of diseases, via self-assessed health, on self-assessed successful ageing was shown to be stronger than its direct effect on successful ageing.

DISCUSSION

This study was conducted on a large sample of elderly people living in Croatia in order to examine the correlation between objective health status operationalized by the number of chronic diseases, subjective health assessment, and self-assessment of successful ageing. Given the importance of health for the quality of life, it is clear why it appears as a dimension in many models of successful ageing, from the earlier ones (2) to the new generation of multidimensional and holistic models (6, 8, 23, 24, 26). In line with the recommendation (27) that both objective and subjective measures of SA should be included in studies, we chose to operationalize health in both ways in this paper. As an objective measure of health, we used a list of eight groups of chronic conditions, as determined by a physician, while self-assessed health was used as a subjective measure. Although these two measures are significantly correlated, it was assumed that their roles in the context of SA may differ. Impaired objective health is often treated as an indicator of less successful ageing within the multidimensional models of SA (6, 8, 23-25), or as a negative predictor or correlate

kako je i subjektivni zdravstveni status značajno povezan s US (16-19). Dok objektivni zdravstveni status može izravno utjecati na proces uspješnog starenja, veza subjektivnog zdravstvenog statusa s uspješnim starenjem je potencijalno složenija. Samoprocjena zdravlja može određivati način na koji se osoba suočava s tjelesnim promjenama u procesu starenja (20), ali i s bolestima te pristupom liječenju, što se može odraziti na ishode bolesti i na uspješno starenje u širem smislu.

Prethodna istraživanja pokazuju da 63 % populacije u dobi od 65 i stariji ima dvije ili više kroničnih bolesti, dok između 6,8 % i 16,1 % (ovisno o odabranom uzorku) nema niti jedno kronično oboljenje (10). Rezultati ovog istraživanja su vrlo slični s obzirom da se kreću u tom rasponu te je 74,8 % sudionika u ovom istraživanju imalo dvije ili više kroničnih bolesti, a 17,7 % niti jednu.

Značajan problem u većini modela i istraživanja u ovom području vezan je uz fizičko funkcioniranje i/ili odsutnost bolesti koja se smatra jednom od dimenzija US pri čemu je istovremeno tretiranje iste varijable (bolesti) kao dijela skupine prediktora (ili determinanti) i dijela kriterija (u vezi s ishodom) logička pogreška. Pokušavajući premostiti ovaj problem odlučili smo koristiti subjektivne mjere odnosno samoprocjenu zdravlja kao medijatora, te objektivne mjere zdravlja poput broja bolesti koje su potvrdili liječnici kao prediktora. Smatrali smo uz to nužnim koristiti i samoprocjenu uspješnog starenja kao kriterija kako bismo uklonili prethodno navedeni problem dvostrukog tretiranja bolesti kao prediktora i kriterija. S obzirom da se do danas niti jedan model US nije nametnuo kao standard koristili smo dio dvofaktorskog modela (7) koji uključuje subjektivnu i objektivnu komponentu, ali mjerili smo samo subjektivnu komponentu US pri čemu smo je izrazili kompozitom US kao procesa i ishoda. Zahvaćanje subjektivne percepcije starijih osoba smatramo ključnim,

of successful ageing. However, subjective health status has also been shown to be significantly associated with SA (16-19). While objective health status can directly influence the process of successful ageing, the correlation of subjective health status with successful ageing is potentially more complex. Self-assessed health can determine how a person copes with physical changes in the ageing process (20), but also with diseases and the approach to their treatment, which can affect both the disease outcomes and successful ageing in a broader context.

Previous studies have shown that 63% of the population aged 65 and above suffers from two or more chronic diseases, while between 6.8% and 16.1% (depending on the sample) have no chronic conditions (10). The results of this study are very similar given that they fall within this range, with 74.8% of the study participants having two or more chronic diseases, and 17.7% having none.

A significant problem in most models and studies in this field relates to physical functioning and/or the absence of disease as one of the dimensions of SA, whereby simultaneously treating the same variable (disease) as both a predictor (or determinant) and a criterion (related to the outcome) represents a logical error. In an attempt to overcome this issue, we decided to use subjective measures, i.e. self-assessed health, as mediators, and objective measures of health, such as the number of diseases confirmed by doctors, as predictors. We also considered it necessary to use self-assessment of successful ageing as a criterion to eliminate the aforementioned problem of dual treatment of disease as both a predictor and a criterion. Since no model of SA has been established as a standard to date, we used a part of the two-factor model (7) which includes subjective and objective components, but measured only the subjective component of SA, where we expressed it as a composite of SA as a process and an outcome. We consider capturing the subjective percep-

bez obzira na tzv. objektivne pokazatelje US kao što su fizičko zdravlje ili funkcionalni status. Način na koji sama osoba procjenjuje svoj proces starenja ili njegov ishod u određenoj vremenskoj točki izuzetno je važan jer može utjecati na ego integritet, odnosno doživljaj smisla cjelokupnog života te na prihvaćanje prošlosti sa svim njenim pozitivnim i negativnim stranama, te na mentalno zdravlje i dobrobit starijih osoba. Ranija istraživanja potvrđuju ovu povezanost uspješnog starenja i ego integriteta i dobrobiti starijih osoba (29-31).

Sudionici ovog istraživanja svoje zdravlje doživljavali su kao prosječno ili dobro (tablica 4.) pri čemu moramo još jednom napomenuti da je većina imala jednu ili više kroničnih bolesti, a viša je samoprocjena zdravlja povezana s mlađom dobi, višim obrazovanjem, s manje bolesti i uspješnijim starenjem. U prethodnim istraživanjima subjektivni zdravstveni status također se pojavljuje kao varijabla povezana s uspješnim starenjem te kao jedan od čimbenika koji pojašnjavaju kako ljudi upravljaju svojom bolešću i postižu dobre ishode (32,33). Moguće je da se osobe koje svoje zdravlje percipiraju na pozitivan način lakše nose s bolestima i terapijskim postupcima, optimističnije pristupaju procesu liječenja pa su vjerojatno stoga kod njih i sami ishodi liječenja pozitivniji. Pri jačanju percepcije vlastitog zdravlja, koja je ključna za motivaciju i dobrobit osoba starije dobi, mogu pomoći ciljane intervencije koje poboljšavaju objektivne ishode, poput kognitivnog treninga, digitalne pismenosti, jačanja socijalnih mreža te rada na pozitivnim uvjerenjima o starenju.

Provjera ispitanog medijacijskog modela pokazuje da bolesti imaju i izravan i neizravan učinak, putem samoprocjene zdravlja, na samopercepciju uspješnog starenja. Međutim, neizravni efekt putem subjektivnog zdravstvenog statusa pokazao se značajno jačim. Dakle, iako bolje objektivno zdravlje, tj. ma-

tion of elderly people to be crucial, regardless of the so-called objective indicators of SA such as physical health or functional status. The manner in which an individual evaluates their ageing process or its outcome at a certain point in time is extremely important because it can affect ego integrity, i.e. the overall experience of meaning in life, the acceptance of the past with all its positive and negative aspects, as well as the mental health and well-being of elderly people. Previous studies have confirmed this connection between successful ageing, ego integrity, and well-being in elderly people (29-31).

The participants in this study perceived their health as average or good (Table 4), and it should be noted again that the majority suffered from one or more chronic diseases. Higher self-assessed health was associated with younger age, higher education, fewer diseases, and more successful ageing. In previous studies, subjective health status also emerged as a variable associated with successful ageing, as well as one of the factors explaining how people manage their disease and achieve good outcomes (32, 33). It is possible that individuals who perceive their health positively cope more easily with diseases and therapeutic procedures, approach the treatment process more optimistically, and consequently probably have more positive treatment outcomes. When it comes to strengthening the perception of one's own health, which is crucial for the motivation and well-being of elderly people, targeted interventions that improve objective outcomes can be helpful, such as cognitive training, digital literacy, strengthening of social networks, and fostering positive beliefs about ageing.

The validation of the mediation model examined indicates that, through self-assessed health, diseases exert both direct and indirect effects on the self-perception of successful ageing. However, the indirect effect through subjective health status was proved to be significantly stronger. Therefore, while better objective health, i.e. having fewer chronic diseases, directly con-

nji broj kroničnih bolesti, i izravno doprinosi povoljnijoj samoprocjeni US, čini se da veću važnost za procjenu osobnog procesa starenja ima procjena vlastitog zdravstvenog stanja nego objektivno zdravstveno stanje samo po sebi. Razumije se da je ta procjena povoljnija ako je i objektivno zdravstveno stanje povoljnije. No postoji i mogućnost da će povoljnija percepcija vlastitog zdravlja, čak i pri postojanju ozbiljnih kroničnih stanja pridonijeti povoljnoj samoprocjeni vlastitog starenja. Pozitivnija samoprocjena vlastitog zdravlja može osobama pomoći pri suočavanju s bolestima i poticati pozitivan ishod. Rezultati našeg istraživanja svoju primjenjivost nalaze u radu zdravstvenih djelatnika sa starijim osobama koji u osobnoj interakciji savjetima i komentarima mogu podržati i utjecati na pozitivnu procjenu zdravlja te na taj način maksimizirati terapijske efekte kod starijih osoba s kroničnim bolestima.

Jedno od ograničenja ovog istraživanja svakako se nalazi u činjenici da nije populacijsko istraživanje, pa rezultati nisu reprezentativni za opću populaciju osoba starije životne dobi u Republici Hrvatskoj. S obzirom da je uzorkovanje provedeno metodom snježne grude, moguće je da su neki sudionici upućivali istraživače na one poznanike svoje dobi za koje su pretpostavljali da mogu biti dobar primjer uspješnog starenja, što je moglo dovesti do sustavnog iskrivljavanja rezultata o US u pozitivnom smjeru. Iako smo svjesni činjenice da prvi sudionici mogu imati utjecaja na one kasnije selektirane (34), ova je metoda izabrana jer omogućuje provođenje istraživanja koje bi inače zbog nedostatka sudionika bilo nemoguće provesti, a upravo su starije osobe pripadnici populacije koja je teže dostupna, nevidljiva ili anonimna. Nadalje, transverzalna priroda našeg istraživanja ne dopušta nam zaključivanje o uzročno-posljedičnim vezama među ispitanim varijablama. Također smo svjesni i toga da su korištene mjere jednostavne samoprocjene

tributes to a more favorable self-assessment of successful ageing, it appears that the evaluation of one's own health status is more important for assessing the personal ageing process than the objective health status itself. Naturally, this assessment is more positive if the objective health status is better as well. However, it is also possible that a more positive perception of one's own health, even in the presence of serious chronic conditions, contributes to a favorable self-assessment of ageing. A more positive self-assessment of health can help individuals cope with their diseases and promote positive outcomes. The results of our study are applicable to the work of healthcare professionals taking care of elderly people, who through personal interaction, advice and comments, can support and influence a positive health assessment and thus maximize the therapeutic effects in elderly people with chronic diseases.

One of the limitations of this study certainly lies in the fact that it is not a population-based study, therefore the results are not representative of the general population of elderly people in the Republic of Croatia. Considering that sampling was conducted using the snowball method, it is possible that some participants referred the researchers to acquaintances of their own age whom they considered good examples of successful ageing, which could have systematically biased the results on SA in a positive direction. Although we are aware that the initial participants may have influenced those selected later (34), this method was chosen because it enables research that would otherwise be impossible due to a lack of participants, particularly as elderly people are a population that is harder to reach, invisible, or anonymous. Furthermore, the cross-sectional nature of our study did not allow us to draw conclusions about cause-and-effect relationships between the variables examined. We are also aware that the measures used were simple self-assessments (often with only one item), which should be replaced in future

(često samo s jednom česticom) koje bi u budućim istraživanjima trebalo zamijeniti pouzdanijim ljestvicama i opetovanim mjerenjima. Pri tome smatramo važnim napomenuti kako su Cosco i sur. (4) zamijetili da je niži rezultat na mjerama US prisutan u onim istraživanjima koja su koristila složene koncepte, pa u tom kontekstu valja sagledati i rezultate ovoga istraživanja u kojem je korištena jednostavna mjera samoprocjene. Prisutnost kroničnih bolesti ili njihov broj u starijoj životnoj dobi samo je jedna od objektivnih mjera bolesti koju smo koristili za potrebe naših projekata. Iako je ta mjera često korištena u istraživanjima na ovom području, možemo ju uvrstiti u metodološki nedostatak, te bi u budućim istraživanjima bilo korisno takve podatke temeljiti na liječničkoj dokumentaciji. Uz to, trebalo bi razmotriti i korištenje mjera kao što su: ograničenja u obavljanju nekih tjelesnih radnji (stajanje, penjanje uz stepenice, saginjanje, hodanje...); kronični problemi povezani s bolešću (poput boli i nesanice); funkcionalnu sposobnost koja uključuju sposobnost obavljanja svakodnevnih aktivnosti (primjerice odijevanja, kupanja...), a sve one čine različite aspekte tjelesnog funkcioniranja koje bi trebalo u nastavku uzeti u obzir. No, uz navedena ograničenja, ovo istraživanje ima i nekoliko jakih strana. Koristili smo veliki uzorak osoba starijih od 65 godina i to velikog dobnog raspona pri čemu je prosječna dob našeg uzorka 74 godine, što ga razlikuje od nekih prethodnih istraživanja (3,7,18,33) uspješnog starenja. Naime, uočeno je da je u tim istraživanjima donja granica dobnog raspona 45, 50, 60 godina te se na taj način o uspješnom starenju zaključuje na dijelovima uzorka koji nisu stari.

Za praćenje promjena u objektivnom zdravstvenom statusu, subjektivnoj procjeni zdravlja i doživljaju uspješnog starenja tijekom vremena neophodne su longitudinalne studije koje omogućavaju identifikaciju onoga što je ključno za uspostavljanje vremenskog slijeda i razlikova-

research with more reliable scales and repeated measurements. It is important to note that Cosco et al. (4) observed that lower scores on SA measures were found in studies that used complex concepts, therefore the results of this study which used a simple self-assessment measure should be interpreted in this context as well. The presence of chronic diseases or their number in older age is only one of the objective measures of disease that we used for our projects. Although this measure has been frequently used in research in this field, it can be considered a methodological shortcoming, and in future studies it would be useful to base such data on medical documentation. In addition, the use of measures such as limitations in performing certain physical activities (standing, climbing stairs, bending, walking, etc.); chronic disease-related issues (such as pain and insomnia); and functional ability, which includes the ability to perform daily activities (e.g. dressing, bathing, etc.) should be considered, since they all constitute different aspects of physical functioning that should be taken into account in future studies. Nevertheless, despite the listed limitations, this study also has several strengths. We used a large sample of individuals over 65 years of age and of a wide age range, wherein the average age of our sample was 74 years, distinguishing it from some previous studies (3, 7, 18, 33) on successful ageing. It has been observed that in those studies the lower limit of the age range was 45, 50 or 60 years, and thus conclusions about successful ageing were drawn from parts of the sample that were not aged.

Longitudinal studies are necessary to monitor the changes in objective health status, subjective health assessment, and the perception of successful ageing over time, since they would allow for the identification of what is crucial for establishing a time sequence and distinguishing direct from indirect effects. In further studies, it would be advisable to separately analyze the groups of diseases that differ

nje izravnih od neizravnih efekata. U nastavku istraživanja bilo bi uputno analizirati zasebno skupine bolesti koje se razlikuju prema svojoj patofiziologiji i implikacijama na svakodnevni život poput primjerice kardiovaskularnih i reumatskih bolesti.

ZAKLJUČAK

Utvrdili smo da je samoprocjena zdravlja medijator povezanosti između bolesti i US iz čega slijede barem dvije praktične implikacije. Prvo, to znači da postoji potreba za povećanjem informiranosti o karakteristikama (simptomi, posljedice, liječenje) pojedinih kroničnih bolesti kako bi se one što prije prepoznale i adekvatno liječile, pratile i održavale funkcioniranje osobe na zadovoljavajućoj razini. Drugo, ovakvi nalazi upućuju na potrebu osvještavanja vlastite uloge u ponašanju koje omogućuje dobro funkcioniranje unatoč bolesti kao i potrebu za mijenjanjem uvriježenih stavova da je svaka bolest sinonim za nemoć i ovisnost o drugima te da su za proces liječenja odgovorni isključivo liječnici. Ovaj odnos sugerira da je od zdravstvenih djelatnika poželjno poticati pozitivan pristup vlastitom zdravlju (ali ne nerealno optimističan), čak i u slučaju nepovoljnog objektivnog zdravstvenog stanja, jer će takva pozitivna percepcija pridonijeti povoljnijoj procjeni vlastitog starenja. S druge strane, potrebno je uzeti u obzir i mogućnost da samoprocjena zdravlja može postati problem u onim slučajevima kada je nerealno pozitivna i potencijalno dovodi do minimiziranja i zanemarivanja znakova neke bolesti ili njenih simptoma. U rasvjetljavanju moguće dvostruke uloge samoprocjene zdravlja u njegovom objektivnom očuvanju bilo bi važno istražiti specifičnosti zdravstvenog ponašanja osoba s određenim vrstama kroničnih bolesti. Kada govorimo o dvostrukoj ulozi, mislimo na to da pozitivna samoprocjena može pozitivno utjecati na US, ali negativno na ishod bolesti ako se lažno pozitivno percipira i/ili dovodi do

in their pathophysiology and implications for daily life, such as cardiovascular and rheumatic diseases.

CONCLUSION

It was determined in this study that self-assessed health mediates the association between diseases and SA, which has yielded at least two practical implications. First, there is a need to increase awareness about the characteristics (symptoms, consequences, treatment) of certain chronic diseases so as to enable their early recognition and appropriate treatment, monitoring, and maintenance of a person's functioning at a satisfactory level. Second, these findings indicate the need to raise awareness of one's own role in behaviors that support good functioning despite disease, and to dispel the widespread attitudes that every disease is synonymous with helplessness and dependence on others, as well as the belief that only doctors are responsible for the treatment process. Furthermore, this correlation suggests that healthcare professionals should encourage a positive approach to one's own health (though not an unrealistically optimistic one), even in case of an unfavorable objective health status, because such a positive perception will contribute to a more favorable assessment of one's own ageing. On the other hand, it is necessary to consider the possibility that the self-assessment of health can become problematic when it is unrealistically positive and potentially leads to minimizing and neglecting the signs or symptoms of a disease. In clarifying the possible dual role of the self-assessment of health in its objective preservation, it would be important to investigate the specifics of health-related behavior in people with certain types of chronic diseases. When referring to the dual role, we refer to the fact that a positive self-assessment can have a beneficial effect on SA, but a negative effect on disease outcomes if it is falsely positively

zanemarivanja simptoma bolesti i nepoduzimanja potrebnih koraka u liječenju. U budućim bi istraživanjima trebalo detaljnije ispitati ovu moguću dvostruku ulogu subjektivnog zdravlja u odnosu između pojedinih bolesti i specifičnih zdravstvenih ponašanja te percepcije vlastitog procesa starenja.

perceived and/or leads to neglecting the symptoms and not taking the necessary steps in treatment. In future studies, this possible dual role of subjective health in relation to individual diseases, specific health-related behaviors, and the perception of one's own ageing process should be examined in more detail.

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