SOCIJALNA PSIHIJATRIJA –
ČASOPIS HRVATSKOGA PSIHIJATRIJSKOG DRUŠTVA
SOCIJALNA PSIHIJATRIJA –
THE JOURNAL OF CROATIAN PSYCHIATRIC SOCIATY

Izdavač/Publisher
Medicinska naklada

Adresa Uredničkog odbora/Address of the Editorial Board
SOCIJALNA PSIHIJATRIJA
Klinika za psihijatriju, Klinički bolnički centar Zagreb, Kišpatićeva 12, 10000 Zagreb, Hrvatska
Department of psychiatry, University Hospital Centre Zagreb, Kišpatićeva 12, 10000 Zagreb, Croatia

Tehnička urednica/Technical Editor
Dunja Beritić-Stahuljak (Zagreb)

Oblikovanje korica/Cover design
Andrea Knapić (Zagreb)

Prijelom/Layout
Marko Habuš (Zagreb)

Tisak/Printed by
Medicinska naklada d.o.o., Zagreb

Časopis je utemeljen 1973. u Klinici za psihijatriju Kliničkog bolničkog centra Zagreb i Medicinskog fakulteta Sveučilišta u Zagrebu, gdje je i sjedište Uredničkog odbora.
The journal was established in 1973. in Zagreb, in the Clinic for Psychiatry, University Hospital Centre Zagreb, School of Medicine, Zagreb and the Editorial board headquarters are situated there as well.

Indeksiran je u bazama: SCOPUS, PsychINFO, Excerpta Medica (EMBASE), Index Copernicus, Google Scholar, EBSCO, HRČAK, CiteFactor
Socijalna psihijatrija is indexed in SCOPUS, PsychINFO, Excerpta Medica (EMBASE), Index Copernicus, Google Scholar, EBSCO, HRČAK, CiteFactor

Izlazi četiri puta godišnje.

Godišnja pretplata za ustanove iznosi **300,00 kn**; za pojedince **150,00 kn**. Cijena pojedinačnog broja **50 kn** (u cijenu su uključeni poštanski troškovi).
IBAN: HR2223600001101226715, Medicinska naklada, Cankarova 13, 10000 Zagreb, Hrvatska (za časopis Socijalna psihijatrija).

The Journal is published four times a year. Orders can be made through our office-address above.
The annual subscription for foreign subscriber is: for institutions **40 €**, for individuals **20 €**, and per issue **10 €** (the prizes include postage).
Payment by check at our foreign currency account:
Zagrebačka banka d.d., Paromlinska 2, 10000 Zagreb, Croatia
IBAN: HR2223600001101226715, **SWIFT:** ZABAHR2X (for Socijalna psihijatrija).

Kontakt/Contact
socijalna.psihijatrija@kbc-zagreb.hr
http://www.kbc-zagreb.hr/soc.psi

Socijalna psihijatrija

UDC 616.89
SPSIDE 47 (1) 1-142 (2019)
ISSN 2459-6140

VOL. 47 – 2019
BROJ/NUMBER 1
ZAGREB, ožujak/March 2019.

SADRŽAJ / *CONTENTS*

IZVORNI ZNANSTVENI RAD / *ORIGINAL SCIENTIFIC PAPER*

I. Tucak Junaković
3 **Usporedba odnosa usamljenosti i preferirane samoće s nekim sociodemografskim varijablama i aspektima subjektivne i psihološke dobrobiti odraslih**
/ Comparison between Relationships of Loneliness and Preference for Solitude with Some Socio-demographic Variables and Aspects of Subjective and Psychological Well-being of Adults

PREGLEDI **/** *REVIEWS*

B. Bagarić, N. Jokić-Begić
28 **Kiberohondrija – zdravstvena anksioznost uvjetovana pretraživanjem interneta**
/ Cyberchondria – Health Anxiety Related to Internet Searching

D. Čuržik
51 **Faktori rizika i kroničnog tijeka posttraumatskog stresnog poremećaja: pregled suvremenih spoznaja**
/ Posttraumatic Stress Disorder Risk and Chronic Course Factors: a Review of Current Findings

STRUČNI RADOVI */PROFESSIONAL PAPERS*

S. Uzun, N. Mimica, O. Kozumplik, M. Kušan Jukić, I. Todorić Laidlaw, D. Kalinić, N. Pivac, T. Glavina, I. Požgain
86 **Alzheimerova bolest – utjecaj na život i psihičko zdravlje njegovateljica**
/ Alzheimer's Disease – Influence on Female Caregivers' Living and Mental Health

G. Arbanas
102 **Tko liječi seksualne probleme u hrvatskom zdravstvenom sustavu?**
/ Who Treats Sexual Problems in Croatian Health System?

PRIKAZ BOLESNIKA / *CASE REPORT*

S. Rogulja, M. Bježančević, P. Horvat, K. Dodig-Ćurković
113 **Landau-Kleffnerov sindrom**
/ Landau-Kleffner Syndrome

PRIKAZ KNJIGE / *BOOK REVIEW*

V. Jukić
126 **M. Perinčić: Na putu kući – „Vidljivo i nevidljivo u psihoterapiji"**
/ M. Perinčić: On the Way Home – „Visible and Invisible in Psychotherapy"

IN MEMORIAM / *OBITUARY*

A. Raič, D. Begić
129 **Prof. dr. sc. Vlado Jukić, dr. med.**
/ Professor Vlado Jukić, MD, PhD

139 **UPUTE AUTORIMA /** ***INSTRUCTIONS TO AUTHORS***

Usporedba odnosa usamljenosti i preferirane samoće s nekim sociodemografskim varijablama i aspektima subjektivne i psihološke dobrobiti odraslih

/ Comparison between Relationships of Loneliness and Preference for Solitude with Some Socio-demographic Variables and Aspects of Subjective and Psychological Well-being of Adults

Ivana Tucak Junaković

Sveučilište u Zadru, Odjel za psihologiju, Zadar, Hrvatska
/ University of Zadar, Department of Psychology, Zadar, Croatia

Za razliku od usamljenosti kao neugodnog i emocionalno uznemirujućeg iskustva preferirana samoća je dobrovoljno povlačenje od drugih. Stoga ona, za razliku od iskustva usamljenosti, ne bi trebala imati nužno negativan utjecaj na dobrobit. Glavni je cilj ovoga istraživanja bio usporediti smjer i jačinu povezanosti usamljenosti i preferirane samoće sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života. U istraživanju je sudjelovalo 325 osoba u dobi od 25 do 70 godina. Za ispitivanje relevantnih konstrukata korištene su: kratka verzija ljestvice usamljenosti UCLA, Adaptirana ljestvica preferirane samoće, Ljestvica zadovoljstva životom, Rosenbergova ljestvica samopoštovanja i Ljestvica smisla života. Rezultati su pokazali da su i usamljenost i preferirana samoća značajno negativno povezane sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života, iako su te povezanosti bile veće za usamljenost nego za preferiranu samoću. Rezultati su također ukazali i na potencijalnu medijatorsku ulogu usamljenosti u odnosu preferirane samoće i ispitanih aspekata subjektivne i psihološke dobrobiti. Razlike u usamljenosti i preferiranoj samoći s obzirom na spol, dob i partnerski status nisu se pokazale značajnima. Jedino je stupanj obrazovanja bio značajno negativno povezan s usamljenošću a pozitivno s preferencijom samoće. Rezultati ovoga istraživanja ukazuju na važnost razlikovanja usamljenosti i samoće u pogledu njihovog utjecaja na dobrobit. Dok je usamljenost u negativnoj vezi s različitim aspektima dobrobiti u različitim razdobljima odrasle dobi, čini se da su starije osobe posebno osjetljive na negativan utjecaj svojevoljnog povlačenja u samoću na subjektivnu i psihološku dobrobit.

Unlike loneliness as an unpleasant and emotionally disturbing experience, preference for solitude is a voluntary withdrawal from other people. Therefore, unlike loneliness, it should not have a necessarily negative effect on well-being. The main goal of this study was to compare the direction and the strength of relationships of loneliness and preference for solitude with life satisfaction, self-esteem, and purpose in life. Three hundred and twenty-five adults, 25 to 70 years old, participated in the study. Relevant constructs were measured by the short version of the UCLA Loneliness Scale, Adapted Preference for Solitude Scale, Satisfaction with Life Scale, Rosenberg's Self-Esteem Scale, and Purpose in Life Scale. Results showed that both loneliness and preference for solitude significantly negatively correlate with life satisfaction, self-esteem, and purpose in life, although those correlations were higher for loneliness than for preference for solitude. Results also pointed out the potential mediation role of loneliness in the relationship between a preference for solitude and aspects of subjective and psychological well-being. Gender, age, and partnership status-related differences in loneliness and preference for solitude were not significant. Only the education level significantly negatively correlated with loneliness, and significantly positively with preference for solitude. The results of this study emphasize the importance of differentiating between loneliness and solitude regarding their influence on well-being. While the relationship of loneliness with different aspects of well-being is negative during all periods of adulthood, it seems that older persons are particularly sensitive concerning the negative influence of voluntary withdrawal into solitude on subjective and psychological well-being.

ADRESA ZA DOPISIVANJE /
CORRESPONDENCE:
Izv. prof. dr. sc. Ivana Tucak Junaković
Sveučilište u Zadru
Obala kralja Petra Krešimira IV. br. 2
23 000 Zadar, Hrvatska
E-pošta: itucak@unizd.hr

KLJUČNE RIJEČI/ *KEY WORDS:*
Usamljenost / *Loneliness*
Samoća / *Solitude*
Zadovoljstvo životom / *Life satisfaction*
Samopoštovanje / *Self-esteem*
Smisao života / *Purpose in life*
Dobrobit / *Well-being*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.3

UVOD

Kao rizični čimbenik za brojne probleme tjelesnog i mentalnog zdravlja usamljenost je bila predmet mnogih istraživanja. Usamljenost se najčešće definira kao neugodno i emocionalno uznemirujuće subjektivno iskustvo koje je posljedica raskoraka između željene i ostvarene razine socijalnog kontakta (1). U dosadašnjim su istraživanjima ispitani brojni prediktori i korelati usamljenosti (2). Među prediktorima usamljenosti svoje mjesto imaju sociodemografske varijable kao što su spol, dob, stupanj obrazovanja, bračni, ekonomski i rezidencijalni status jer one, putem svog utjecaja na mogućnost formiranja i održavanja zadovoljavajuće socijalne mreže, mogu utjecati i na doživljaj usamljenosti. Međutim, rezultati dosadašnjih istraživanja odnosa različitih sociodemografskih varijabli i iskustva usamljenosti nisu jednoznačni. Primjerice, u pogledu spolnih razlika neka istraživanja ukazuju na veću usamljenost u djevojčica, djevojaka ili žena (3,4), druga nalaze veću usamljenost u dječaka, mladića ili muškaraca (5-9), dok treća nisu našla značajne spolne razlike (10-12). Različita su objašnjenja ovih nesuglasnih nalaza, a jedno od njih odnosi se na metodologiju istraživanja. Tako Borys i Perlman (3) objašnjavaju da dječaci, mladići i muškarci teže priznaju da su usamljeni jer su usamljeni muškarci više stigmatizirani od usamljenih žena i da zato postižu niže rezultate na mjerama u kojima se riječ usamljenost izravno koristi a više rezultate na mjerama u kojima se

INTRODUCTION

As a risk factor for many problems of physical and mental health, loneliness has been the subject of numerous studies. It is usually defined as an unpleasant and emotionally disturbing subjective experience that is the consequence of discrepancy between the desired and realized level of social contact (1). Numerous predictors and correlates of loneliness have been studied so far (2). Among the predictors of loneliness, socio-demographic variables such as gender, age, education, marital, economic, and residential status found their place because they, through their influence on the ability to form and maintain a satisfactory social network, can also affect the experience of loneliness. However, the results of previous research of the relationship between various socio-demographic variables and the experience of loneliness are not consistent. For example, regarding gender differences, some research suggests greater loneliness in girls or women (3,4), others find greater loneliness in boys or men (5-9), while the third did not find significant gender differences (10-12). There are various explanations of these inconsistent findings, one of which relates to the research methodology. Thus, Borys and Perlman (3) explain that boys and men are less likely to admit that they are lonely because lonely men are more stigmatized than lonely women and therefore men achieve lower results on measurements that use the word *loneliness*, and higher results on measurements that do not use ta riječ ne koristi izravno. U ovom smo istraživanju koristili jednu od verzija u svijetu najčešće korištene mjere usamljenosti –ljestvice usamljenosti UCLA, u kojoj se riječ usamljenost ni jednom ne spominje, pa je oslobođena prigovora koje navode Borys i Perlman (3) a koji bi mogli utjecati na eventualne spolne razlike u usamljenosti. Kada je riječ o jednodimenzionalnim mjerama usamljenosti, u istraživanjima u kojima je utvrđeno da su žene usamljenije u odnosu na muškarce, to je uglavnom objašnjavano većom važnošću koju interpersonalni odnosi imaju za žene i u vezi s tim njihovim većim očekivanjima od tih odnosa iz kojih onda proizlazi i veći raskorak između željene i ostvarene razine odnosa. Drugo je objašnjenje da žene imaju bolji uvid u svoje emocije te da su spremnije priznati da su usamljene. Veća globalna usamljenost u muškaraca u odnosu na žene objašnjavana je slabijom socijalizacijom muškaraca u području interpersonalnih odnosa i njihovim lošijim strategijama suočavanja s usamljenošću.

Dobne razlike u usamljenosti rjeđe su ispitivane od onih spolnih a rezultati ovih istraživanja također nisu suglasni. Obično se naglašava kako je doživljaj usamljenosti osobito izražen u adolescenciji i preadolescenciji (2,13,14,) što se objašnjava intenzivnim razvojnim promjenama u ovom životnom razdoblju, kako na tjelesnom i hormonskom, tako i na kognitivnom, psihološkom i socijalnom planu. U pogledu dobnih razlika u usamljenosti u odrasloj dobi, većina studija ne podržava stereotip o starim osobama kao najusamljenijima, odnosno pokazuje da su adolescenti i mlađe odrasle osobe usamljenije od starijih, što se objašnjava u kontekstu teorije uloga (15) i razvojnih teorija kao što su Eriksonova teorija psihosocijalnog razvoja i Levinsonova teorija životnih razdoblja (2). Naime, starije osobe imaju manju potrebu u pogledu čestine socijalnih kontakata i širine socijalne mreže te, u skladu s teorijom socioemocionalne selektivnosti (16), smanjuju svoje

this word directly. In this research, we administered one of the most commonly used measurements of loneliness in the world - the UCLA Loneliness Scale, in which the word *loneliness* is not mentioned at all. Therefore, it is free of the objections raised by Borys and Perlman (3), which could affect potential gender differences in loneliness. When it comes to unidimensional measurements of loneliness, in research that found that women are more lonely than men, this is usually explained by the greater importance that interpersonal relationships have for women and, related to this, by their greater expectations from these relationships, which can result in the greater discrepancy between the desired and realized level of relationship. Another explanation is that women have a better insight into their emotions and are more likely to admit they are lonely. Greater global loneliness in men compared to women was explained by the poorer socialization of men in the area of interpersonal relationships and their less effective strategies of coping with loneliness.

Age differences in loneliness are less frequently examined than gender ones, and the results of these studies are also inconsistent. Usually it is emphasized that the experience of loneliness is particularly pronounced in adolescence and pre-adolescence (2,13,14), which is explained by intense developmental changes in this period of life, changes on the physical and hormonal as well as on the cognitive, psychological, and social level. Regarding age differences in loneliness in adulthood, most studies do not support the stereotype of older people as the loneliest ones. They show that adolescents and young adults are lonelier than older adults, which is explained in the context of role theory (15) and developmental theories such as Erikson's theory of psychosocial development and Levinson's theory of the seasons of life (2). Namely, older people have less need regarding frequency of social contacts and social network width and, according to the theory of socioemotional selecsocijalne interakcije i svode ih na one s manjim brojem emocionalno bliskih osoba. Stavljaju veći naglasak na emocionalnu kvalitetu socijalnih iskustava nego na njihovu kvantitetu. Uz to, starijim ljudima su socijalni i emocionalni gubitci gotovo normativna iskustva a oni obično imaju dugotrajnije bliske veze koje ih štite od usamljenosti, dok mlađe osobe imaju širu mrežu odnosa koji često i nisu previše bliski (2). Sve je to razlog često nađenoj manjoj usamljenosti u starijih osoba u odnosu na mlađe odrasle osobe i adolescente.

U pogledu uloge bračnog statusa rezultati brojnih studija provedenih u različitim kulturama, uključujući i hrvatsko kulturno okruženje, nedvojbeno ukazuju na veće životno zadovoljstvo, sreću, bolje zdravlje i općenito, veću dobrobit, uključujući i manju usamljenost, kod osoba u braku i u trajnoj izvanbračnoj vezi u odnosu na samce koji nikada nisu bili u braku, rastavljene i udovce (17-19). Razumije se, ovdje je važnija kvaliteta partnerskog odnosa nego sam bračni/partnerski status i ta kvaliteta i prisnost s partnerom je ono što štiti od usamljenosti.

Obrazovanje je u odnosu na ranije spomenute sociodemografske varijable rjeđe bilo uključeno u skup potencijalnih prediktora usamljenosti. Rezultati ovih istraživanja na odraslim osobama uglavnom ukazuju na negativnu povezanost usamljenosti i stupnja obrazovanja (2).

Autorica Lacković-Grgin (2) u svom pregledu rezultata dotadašnjih istraživanja odnosa različitih sociodemografskih varijabli i usamljenosti zaključuje da se čini da se usamljenijima osjećaju mlade osobe, one nižeg obrazovanja i, s njim često povezanog, nižeg ekonomskog statusa, te osobe koje nisu u braku.

Empirijski nalazi o odnosu usamljenosti i različitih indikatora tjelesnog i mentalnog zdravlja, dobrobiti i kvalitete života su prilično jednoznačni, i to u različitim dobnim podskupinama, iako se ti indikatori ponekad treti-

tivity (16), they reduce their social interaction to those with a smaller number of emotionally close persons. They place greater emphasis on the emotional quality of social experiences than on their quantity. In addition, for older people, social and emotional losses are almost normative experiences, and they usually have longer lasting close relationships that protect them from loneliness, while younger people have a wider network of relationships that often are not too close (2). All of the abovementioned is the reason for the frequently less pronounced experience of loneliness in older people compared to younger adults and adolescents.

With regard to the role of marital status, the results of numerous studies in different cultures, including the Croatian cultural setting, undoubtedly point to greater life satisfaction, happiness, better health, and in general, greater well-being, including lesser loneliness, in people who are married or cohabitating compared to single people who have never been married or are divorced and widowed (17-19). Of course, the quality of partnership is more important here than just being in a marital/partner relationship, and that quality and intimacy with the partner is the one that protects against loneliness.

Education compared to the aforementioned socio-demographic variables was rarely included in a set of potential predictors of loneliness. The results of these studies on adults mostly point to the negative correlation of loneliness and the level of education (2).

In her review of the results of previous research on the relationship between different socio-demographic variables and loneliness, Lacković-Grgin (2) concludes that young, less educated people, with lower economic status, and those that are not married seem to feel lonelier.

The empirical findings on the relationship between loneliness and various indicators of physical and mental health, well-being and quality of life are rather unambiguous in difraju kao antecedenti, a ponekad kao posljedice usamljenosti. Ovi nalazi ukazuju na pozitivnu povezanost usamljenosti s depresijom (20-23), anksioznošću, neuroticizmom, pesimizmom (23-25) i različitim tjelesnim tegobama kao što su visoki krvni tlak (26), smetnje spavanja (27), pojačane reakcije imunološkog i neuroendokrinog sustava na stres (28) te povećani rizik obolijevanja od kardiovaskularnih bolesti (29). S druge strane pokazalo se da je usamljenost negativno povezana sa zadovoljstvom životom, srećom i samopoštovanjem (24,30-32).

Za razliku od usamljenosti kao subjektivnog stanja koje nedvojbeno ima negativan utjecaj na dobrobit pojedinca, samoća kao objektivno stanje u kojem je osoba odvojena od drugih i lišena svih aspekata socijalne interakcije, mnogo je rjeđe bila predmet istraživačkog interesa. Uz iznimku godina odgoja djece, količina svakodnevnog vremena provedenog u samoći tijekom životnog vijeka raste (33). Tako djeca u dobi između 9 i 12 godina izvješćuju da sami provode oko 17 % vremena, srednjoškolci oko 26 %; odrasli izvješćuju o 29 % vremena provedenog u samoći, dok starije umirovljene osobe izvješćuju da same provode čak 48 % vremena (33). I druge studije iznose slične rezultate pokazujući da starije, u odnosu na osobe mlađih dobnih skupina, provode mnogo više vremena same, tj. polovicu ili više vremena tijekom budnih sati (33). Pitanje je kakav učinak vrijeme provedeno u samoći ima na dobrobit pojedinca i je li taj odnos linearan. Studije pokazuju da, za razliku od usamljenosti čiji je utjecaj na dobrobit isključivo negativan, utjecaj samoće na dobrobit može biti i pozitivan i negativan, ovisno o preferenciji pojedinca da bude sam (34), ovisno o situacijskim i osobnim čimbenicima (35), odnosno ovisno o tome je li samoća željena, koji joj je cilj i čime je ispunjena (2). Tako je samoća koja nije nužno izbor pojedinca povezana s izraženijom sramežljivošću, depresijom, samosviješću i

ferent age subgroups, although these indicators are sometimes treated as antecedents and sometimes as results of loneliness. These findings indicate a positive correlation of loneliness with depression (20-23), anxiety, neuroticism, pessimism (23-25), and various physical disorders such as high blood pressure (26), sleep disturbances (27), increased immune and neuroendocrine stress response (28), and increased risk of cardiovascular disease (29). On the other hand, loneliness has been shown to be negatively associated with life satisfaction, happiness, and self-esteem (24,30-32).

Unlike loneliness as a subjective state that undoubtedly has a negative impact on the well-being, solitude as an objective state in which a person is separated from others and deprived of all aspects of social interaction was much less subject to research interest. With the exception of years of upbringing, the amount of daily time spent in solitude during lifetime grows (33). Thus, children between the ages of 9 and 12 report that they spend about 17% of their time alone, high school students around 26%; adults report about 29% of their time is spent in solitude, while older retired persons report that they spend even 48% of their time alone (33). Other studies also show similar results, demonstrating that older people, compared to younger age groups, spend much more time alone, i.e. half or more of their awake hours (33). The question is what kind of effect the time spent in solitude has on the well-being of an individual and whether this relationship is linear. Studies show that, unlike loneliness, whose effect on well-being is exclusively negative, the impact of solitude on well-being can be both positive and negative, depending on the individual's preference to be alone (34), situational and personal factors (35), that is depending on whether solitude is desired and what its purpose and content are (2). Therefore, loneliness that is not necessarily an individual's choice is associated with more a pronounced expression of shyness, depression, self-coninhibicijom te nižim samopoštovanjem (36). Larson (33) na temelju rezultata većeg broja istraživanja zaključuje da većina ljudi, različitih dobnih skupina, iz normalnih i kliničkih uzoraka, pripadnika različitih kultura, izvješćuje da se osjeća manje sretnima i usamljenijima kada su sami nego kada su u društvu drugih, iako ova negativna povezanost dobrobiti i samoće s dobi slabi. Čini se da je utjecaj samoće na psihološku prilagodbu najnegativniji u djetinjstvu i adolescenciji, a najmanje negativan u starosti. S obzirom na različite razvojne zadatke pojedinih životnih razdoblja adolescenti doživljavaju razdoblja samoće posebno bolnima i usamljenima, dok, s druge strane, umirovljene starije osobe samoću doživljavaju najmanje prijetećom u smislu doživljaja usamljenosti (33). Pokazalo se da je u adolescenata i mladih, koji su više nego starije osobe izloženi društvenim očekivanjima da kreiraju široku socijalnu mrežu koja bi trebala imati mnoge korisne funkcije, čak i *preferencija* samoće negativno povezana s pokazateljima mentalnog zdravlja, odnosno da je povezana s negativnim afektom i nižim samopoštovanjem (37), kao i s povećanim rizikom suicidalne ideacije i samoozljeđivanja (38). Međutim, velika količina vremena provedenog u samoći može imati negativne učinke na zdravlje i subjektivnu dobrobit i odraslih i starijih osoba, dok kratkotrajna samoća nije nužno negativno iskustvo, a njezini pozitivni učinci s dobi jačaju (39). Ovdje je potrebno razlikovati samoću kao objektivno stanje odvojenosti od drugih, bez obzira na to je li svojevoljno izabrana ili ne, od *preferencije* samoće gdje je samoća željeno i dobrovoljno stanje lišenosti socijalnih kontakata. Naime, ljudi se međusobno razlikuju u svojoj preferenciji samoće, odnosno optimalan omjer socijalne uključenosti i vremena provedenog u samoći razlikuje se od pojedinca do pojedinca.

U odraslih se osoba često govori o povoljnim učincima ovakve preferirane samoće ili do-

sciousness and inhibition, and lower self-esteem (36). On the basis of the results of a number of studies, Larson (33) concludes that most people, from different age groups, from normal and clinical samples, and from different cultures, report that they feel less happy and lonelier when they are alone than when they are with other people. However, this negative association between well-being and solitude weakens with age. It seems that the impact of solitude on psychological adjustment is the most negative in childhood and adolescence, and the least negative in old age. Given the different developmental tasks of various periods of life, adolescents experience periods of solitude as particularly painful and lonely, while, on the other hand, elderly retired people experience solitude as the least threatening for developing the experience of loneliness (33). It has been shown that in adolescents and young people, who are more so than older people exposed to social expectations to create a wide social network that should have many useful functions, even the *preference* for solitude is negatively related to mental health indicators. That is, this preference is associated with a negative affect and lower self-esteem (37), as well as with an increased risk of suicidal ideation and self-harm (38). However, a large amount of time spent in solitude can have negative effects on the health and subjective well-being of adults and the elderly as well, while short-term solitude is not necessarily a negative experience and its positive effects increase with age (39). Here it is necessary to differentiate between solitude as an objective state of separation from others, regardless of whether it is voluntarily chosen or not, and the *preference* for solitude where solitude and the voluntary state of deprivation of social contacts are desired. Namely, people differ in their preference for solitude, that is, the optimal ratio of social inclusion and the time spent in solitude differs from one individual to another.

In adults, the beneficial effects of such a preference for solitude or voluntary withdrawal from brovoljnog povlačenja od drugih. Riječ je o željenom stanju u kojem se pojedinac ne osjeća usamljeno. Funkcije ovakvog dobrovoljnog povlačenja u osamu su različite: opuštanje, kontemplacija, odmor od zahtjeva socijalnih uloga, umjetničko i kreativno izražavanje, samoevaluacija, integracija osobnih iskustava, duhovne težnje, postizanje unutarnjeg mira, učenje, suočavanje ili oporavak nakon stresnih događaja, itd. (2, 40-43). Zato se samoću nerijetko opisuje kao ljekovitu. Lacković-Grgin (2, str. 46) navodi da je „ljekovitost samoće u mogućnosti susreta sa sobom i prestanka bježanja od samoga sebe“.

Dakle, s obzirom na razlike između iskustva usamljenosti i preferirane samoće, glavni je problem i cilj ovoga istraživanja bio usporediti smjer i jačinu njihove povezanosti s tri ispitana aspekta dobrobiti. To su zadovoljstvo životom, kao aspekt subjektivne dobrobiti, te samopoštovanje i smisao života, kao aspekti psihološke dobrobiti. U psihologijskoj literaturi subjektivna dobrobit odnosi se na tzv. hedonističku komponentu dobrobiti i uključuje zadovoljstvo životom, pozitivne emocije, iskustva ugode i sl. (44). S druge strane, pojam psihološke dobrobiti više se odnosi na tzv. eudemonistički aspekt dobrobiti te uključuje konstrukte poput samoprihvaćanja, samoaktualizacije, osobnog rasta i razvoja, doživljaja smisla života i sl. (44,45).

Pretpostavljeno je da će usamljenost kao neugodno subjektivno iskustvo biti značajno negativno povezana s ispitanim aspektima dobrobiti. S druge strane, pretpostavljeno je da preferirana samoća, kao dobrovoljno povlačenje od drugih koje ne bi trebalo izazivati neugodne emocije, neće biti negativno povezana s varijablama dobrobiti. Konkretnije, pretpostavljeno je da s njima ili neće biti značajno povezana ili će ta povezanost biti čak značajna i pozitivna.

Sljedeći je problem bio usporediti povezanosti usamljenosti i preferirane samoće s ispitanim aspektima dobrobiti u podskupinama mlađe, srednje i starije odrasle dobi.

others are often discussed. It is a desirable condition in which an individual does not feel lonely. The functions of this kind of voluntary withdrawal are different: relaxation, contemplation, relief from the demands of social roles, artistic and creative expression, self-evaluation, integration of personal experiences, spiritual aspirations, reaching inner peace, learning, coping or recovery after stressful events, etc. (2,40-43). So, solitude is often described as healing. Lacković-Grgin (2) states “the healing capacity of solitude is in its ability for an individual to meet with and stop running away from oneself” (p. 46).

Therefore, given the differences between the experience of loneliness and preference for solitude, the main problem and aim of this research was to compare the direction and strength of their relationship with the three examined aspects of well-being. These are life satisfaction, as an aspect of subjective well-being, and self-esteem and the purpose in life, as aspects of psychological well-being. In psychological literature, subjective well-being refers to the so-called hedonic component of well-being and includes life satisfaction, positive affects, pleasurable experiences, etc. (44). On the other hand, psychological well-being is more related to the so-called eudaimonic aspect of well-being and includes constructs such as self-acceptance, self-actualization, personal growth and development, purpose in life, etc. (44,45).

It is assumed that loneliness, as an unpleasant subjective experience, will be significantly negatively related to the examined aspects of well-being. On the other hand, it is hypothesized that preference for solitude, as a voluntary withdrawal from others that should not cause unpleasant emotions, will not be negatively associated with the variables of well-being. More specifically, it is hypothesized that preference for solitude will either not be significantly associated with well-being indices or that this relation will be even significant and positive.

Pretpostavljeno je da će jačina povezanosti usamljenosti s tri aspekta dobrobiti biti slična u tri podskupine, jer se u svakom životnom razdoblju usamljenost doživljava kao bolno iskustvo. S druge strane, u skladu s ranije iznesenim nalazima o pozitivnijem ili manje nepovoljnom utjecaju samoće na psihološku dobrobit u starijih u odnosu na mlađe osobe, pretpostavljeno je da će preferirana samoća biti jače pozitivno odnosno manje negativno povezana s varijablama dobrobiti u starijih u odnosu na mlađe i sredovječne osobe.

Prije odgovora na ova dva glavna problema istraživanja, prvi je problem bio ispitati razlike i povezanost usamljenosti i preferirane samoće s nekim sociodemografskim varijablama, točnije, spolom, dobi, bračnim statusom i stupnjem obrazovanja.

METODA

Sudionici

Rezultati opisani u ovom radu prikupljeni su u okviru šireg istraživanja nekih odrednica dobrobiti odraslih osoba. Istraživanje je provedeno na prigodnom uzorku od 325 osoba u dobi od 25 do 70 godina (M = 51,1, SD = 13,56), od kojih 165 žena i 160 muškaraca. Sudionici su živjeli u 13 hrvatskih županija pri čemu je najveći dio bio iz Šibensko-kninske (28,5 %), Splitsko-dalmatinske županije (25,7 %) i Grada Zagreba (14,7 %). Prigodom formiranja uzorka vodilo se računa o tome da različite dobne podskupine (npr. od 25 do 35 godina, od 35 do 45, itd.) imaju sličan broj sudionika i da budu heterogene s obzirom na sociodemografska obilježja. Najveći je broj sudionika u vrijeme ispitivanja živio u bračnoj zajednici (73 %), dok su ostatak uzorka činili samci koji nikada nisu bili u braku (13 %), udovci (8 %), osobe koje žive u nevjenčanoj zajednici (3 %) i razvedene osobe (3 %). Većina sudionika završila je najviše srednju školu, a broj završenih godina školovanja

The next problem was to compare the correlations of loneliness and preference for solitude with examined aspects of well-being in subgroups of younger, middle-aged, and older adults.

It is hypothesized that the strength of the correlation of loneliness with three aspects of well-being will be similar in three age groups because loneliness is perceived as a painful experience in every period of life. On the other hand, in line with the abovementioned findings of a more positive or less adverse effect of solitude on psychological well-being in older compared to younger people, it is assumed that preference for solitude will be more positively or less negatively correlated with well-being variables in older compared to young and middle-aged adults.

Before answering these two main research problems, the first problem was to examine differences and correlations of loneliness and preference for solitude with some socio-demographic variables, namely, gender, age, marital status, and education.

METHOD

Subjects

The results described in this paper have been collected in the more extensive research of some of the determinants of well-being of adults. The study was conducted on a convenience sample of 325 people, 25 to 70 years old (M = 51.1, SD = 13.56), of which 165 were women and 160 were males. The participants lived in 13 Croatian counties, most of them in the county of Šibenik-Knin (28.5%), Split-Dalmatia (25.7%), and the City of Zagreb (14.7%). When recruiting participants, it was taken into account that different age groups (e.g. 25 to 35 years, 35 to 45, etc.) should have a similar number of participants and should be heterogeneous regarding socio-demographic characterisiznosio je između 8 i 21 godine (M = 12,24, SD = 2,67).

Muškarci i žene ovoga uzorka nisu se značajno razlikovali s obzirom na dob (t = 0,18, p > ,05), godine školovanja (t = 0,57, p >,05) i bračni status (χ^2 = 0,63, p >,05).

Mjerni instrumenti

Podatci su prikupljeni upitnikom koji je uključivao:

1. Pitanja o sociodemografskim značajkama: spol, dob, ukupne godine školovanja (bez ponavljanja godine) i bračno stanje (samac/ica, oženjen/udana, nevjenčana zajednica, razveden/a, udovac/ica).
2. *Kratka verzija ljestvice usamljenosti UCLA* (31,46) uključuje sedam čestica. Ljestvica ispituje usamljenost kao opći jednodimenzionalni konstrukt definiran kao neugodno stanje uvjetovano nemogućnošću pojedinca da zadovolji svoje potrebe za bliskošću, ljubavi i pripadanjem. Na čestice se odgovara pomoću ljestvice Likertovog tipa od pet stupnjeva, od 1 (uopće se ne odnosi na mene) do 5 (u potpunosti se odnosi na mene). Ukupan rezultat izračunava se kao zbroj procjena na pojedinim česticama podijeljen brojem čestica. Kako na stranim, tako i na našim uzorcima, potvrđena je jednodimenzijska struktura ljestvice i njezina visoka pouzdanost (31). U ovom je istraživanju također dobivena jednofaktorska struktura ljestvice i Cronbach alfa koeficijent od ,84.
3. *Adaptirana ljestvica preferirane samoće* (47) sastoji se od sedam čestica koje ispituju preferenciju pojedinca da bude sam, pri čemu se ne osjeća neugodno već ugodno. Na čestice se odgovara pomoću ljestvice Likertovog tipa od pet stupnjeva, od 1 (uopće se ne odnosi na mene) do 5 (u potpunosti se odnosi na mene). Ukupan rezultat izračunava se kao prosjek procjena na poje-

tics. The majority of participants were married (73%), while the rest of the sample consisted of single persons who had never been married (13%), widows (8%), cohabitating unmarried individuals (3%), and divorced people (3%). The highest level of education for most of the participants was high school, and the number of finished years of education ranged between 8 and 21 (M = 12.24, SD = 2.67).

The men and women of this sample did not differ significantly with respect to age (t = 0.18, p>, .05), years of education (t = 0.57, p>.05) and marital status (χ^2 = 0.63, p>. 05).

Measures

The data were collected using a questionnaire that included:

1. Questions about socio-demographic characteristics: gender, age, years of education (without repeating the year), and marital status (single, married, cohabitating, divorced, widowed).
2. *A short version of UCLA Loneliness Scale* (31,46) includes seven items. The scale measures loneliness as a general unidimensional construct defined as an unpleasant experience caused by the inability of an individual to meet his/her needs for intimacy, love, and affiliation. Respondents rate each item on a 5-point Likert scale, from 1 (does not apply to me at all) to 5 (totally applies to me). The total score is a sum of ratings of all items divided by the number of items. Both on foreign and on Croatian samples, the unidimensional structure of the scale and its high reliability were confirmed (31). In this study, a single-factor structure is also obtained and a Cronbach alpha coefficient of .84.
3. *The Adapted Preference for Solitude Scale* (47) includes seven items that examine the individual's preference to be alone, which does not feel uncomfortable but pleasant. Each

dinim česticama. U ranijim primjenama ljestvice na našim uzorcima studenata i odraslih osoba utvrđena je jednofaktorska struktura ljestvice i zadovoljavajuća pouzdanost tipa unutarnje konzistencije, između ,74 i ,79 (47). U ovom je istraživanju potvrđena jednofaktorska struktura ljestvice. Cronbach alfa koeficijent iznosio je ,76.

4. *Ljestvica zadovoljstva životom* (*The Satisfaction With Life Scale*, SWLS) (48) ispituje zadovoljstvo životom kao kognitivnu komponentu subjektivne dobrobiti, odnosno opću svjesnu evaluaciju života na osnovi vlastitih kriterija. Ljestvica uključuje pet čestica. Odgovori se daju na ljestvici Likertovog tipa od sedam stupnjeva. Ukupan rezultat je prosječna vrijednost procjena na pojedinim česticama. U brojnim primjenama ljestvice na različitim uzorcima potvrđena je njezina jednofaktorska struktura, visoka pouzdanost i kroskulturna primjenjivost (49). U ovom je istraživanju ljestvica također pokazala jednofaktorsku strukturu i visoku pouzdanost Cronbach alfa (,82).
5. *Rosenbergova ljestvica samopoštovanja* (50) mjeri samopoštovanje definirano kao opći konstrukt koji se odnosi na pozitivan ili negativan stav prema sebi. Ljestvica se sastoji od deset čestica od kojih je pet u pozitivnom, a pet u negativnom smjeru. Odgovori se daju na ljestvici Likertovog tipa s pet stupnjeva. Ukupan rezultat formira se kao prosječna vrijednost procjena na pojedinim česticama, nakon obrnutog bodovanja negativno formuliranih čestica. U brojnim primjenama ljestvice pokazalo se da ona pouzdano mjeri globalno samopoštovanje (51-54). U ovom je istraživanju također utvrđena jednofaktorska struktura ljestvice i njezina visoka pouzdanost (Cronbach alfa= ,82).
6. *Ljestvica smisla života* (55) sastoji se od 23 čestice koje zahvaćaju emocionalni aspekt smisla, tj. kvalitetu egzistencije i kogni-

item is rated on a 5-point Likert scale, from 1 (does not apply to me at all) to 5 (totally applies to me). The total score is calculated as the average of ratings of all items. In the previous administration of the scale on Croatian samples of students and adults, the one-factor structure of the scale and the satisfactory internal consistency coefficients, between .74 and .79, were determined (47). In this study, the one-factor structure of the scale was confirmed. The Cronbach alpha coefficient was .76.

4. *The Satisfaction with Life Scale* (SWLS) (48) measures life satisfaction as a cognitive component of subjective well-being, i.e. a general conscious evaluation of life based on one's own criteria. The scale includes five items. The respondents answer on a 7-point Likert scale. The total score is the average of responses on all items. In numerous applications of the scale in various samples, its one-factor structure, high reliability, and cross-cultural applicability have been confirmed (49). In this study also, the scale showed a one-factor structure and high Cronbach alpha coefficient (.82).
5. *Rosenberg's Self-esteem Scale* (50) measures self-esteem defined as a global construct that refers to a positive or negative attitude toward oneself. The scale includes ten items, five of which are positively formulated while five are negatively formulated. The respondents rate each item on a 5-point Likert scale. The total result is the average of ratings on all items after recording negatively formulated items. In numerous applications of the scale, it has been proven to be a reliable measure of global self-esteem (51-54). In this study, the single-factor structure of the scale and its high reliability (Cronbach alpha = .82) were also determined.
6. *The Purpose in Life Scale* (55) consists of 23 items that gripe the emotional aspect of

tivni aspekt smisla, tj. svrhu egzistencije. Ljestvica je nastala adaptacijom PIL skale (*Purpose in Life Test*) autora Crumbaugha i Maholicka (55). Polazi od Franklovih teorijskih postavki i egzistencijalističkog pristupa smislu života i iskustvu egzistencijalne praznine. PIL ljestvica ima dugu tradiciju i najčešće je korištena mjera za procjenu stupnja u kojem osoba doživljava svoj život smislenim. Na tvrdnje Ljestvice smisla života ispitanici odgovaraju pomoću ljestvice od pet stupnjeva, od 1 (uopće se ne odnosi na mene) do 5 (u potpunosti se odnosi na mene). Ukupan rezultat izračunava se kao zbroj procjena na pojedinim česticama uz prethodno obrnuto bodovanje negativno formuliranih tvrdnji. Mogući raspon rezultata kreće se od 23 do 115 pri čemu viši rezultat označava veći doživljaj smisla života. U ranijim istraživanjima na uzorcima srednjoškolaca (55) i odraslih (56) Ljestvica smisla života je pokazala jednofaktorsku strukturu i visoku pouzdanost. U ovom je istraživanju ta jednofaktorska struktura potvrđena, a Cronbach alfa koeficijent iznosio je ,88.

Postupak

Sudionike su metodom snježne grude regrutirali voditeljica istraživanja i studenti diplomskog studija psihologije Sveučilišta u Zadru, posebno uvježbani za primjenu upitnika. Kako se pokušao formirati uzorak u kojem bi pojedine dobne podskupine bile približno podjednako zastupljene, svaki je ispitivač imao zadatak da regrutira određeni broj muškaraca i žena u pojedinim dobnim podskupinama (od 25 do 35, od 35 do 45 godina, itd.). Uz to, iako je riječ o prigodnom uzorku, nastojalo se da uzorak obuhvati sudionike iz različitih hrvatskih krajeva i heterogenih sociodemografskih obilježja, kao što su stupanj obrazovanja i bračni status, u pojedinim dobnim podskupinama. Podatci su prikupljani individualno pomoću upitnika koji su

meaning i.e. the quality of existence and the cognitive aspect of meaning i.e. the purpose of existence. The scale is a result of the adaptation of the PIL scale (*Purpose in Life Test*) by Crumbaugh and Maholick (55). It is based on Frankl's theoretical assumptions and existentialist approach to the meaning of life and the existential emptiness experience. The PIL scale has a long tradition and is the most commonly used measure of the extent to which individuals experience their lives as meaningful. Respondents rate the items of The Purpose in Life Scale on a 5-point scale, from 1 (does not apply to me at all) to 5 (totally applies to me). The total score is calculated as a sum of ratings on all items, after recoding of negatively formulated items. The total results can range from 23 to 115, with the higher score indicating a greater sense of purpose in life. In previous research on high school students (55) and adults (56), a one-factor structure and high reliability of the scale were determined. In this study, the one-factor structure was confirmed, and the Cronbach alpha coefficient was .88.

Procedure

Participants were recruited by the researcher and with the assistance of psychology students of the University of Zadar, specially trained in the administration of the questionnaires. The sample was recruited by using the snowball sampling method. Since aiming to form a sample in which different age groups would be approximately equally represented, researchers had the task of recruiting a certain number of men and women in certain age groups (25 to 35, 35 to 45 years, etc.). Additionally, despite convenience sampling, the researchers made an effort to include participants from different Croatian regions and of heterogeneous socio-demographic characteristics, such as the level of education and marital status, in each age subsudionici popunjavali samostalno u prisutnosti ispitivača ili su, prema potrebi, ispitivači čitali pitanja i tvrdnje sudioniku. Primjena upitnika trajala je između 20 i 35 minuta.

REZULTATI

Osnovni deskriptivni pokazatelji

Osnovni deskriptivni podatci ispitanih varijabli prikazani su u tablici 1.

Iz pregleda prosječnih vrijednosti rezultata postignutih na pojedinim mjerama može se primijetiti da su rezultati na ljestvicama usamljenosti i preferirane samoće pomaknuti prema nižim vrijednostima, dok su rezultati na mjerama zadovoljstva životom, samopoštovanja i smisla života pomaknuti prema višim vrijednostima. Ovi rezultati ne iznenađuju s obzirom da se ne radi o kliničkim uzorcima.

Razlike i povezanosti usamljenosti i preferirane samoće sa sociodemografskim značajkama

Kako bi se odgovorilo na prvi problem istraživanja, tj. ispitale razlike i povezanost usamljenosti i preferirane samoće s nekim sociodemografskim varijablama, izračunati su Pearsonovi koeficijenti korelacije usamljenosti i samoće s dobi i ukupnim godinama školovanja, zatim dvosmjerne analize varijance za ispitivanje glavnog učinka spola i dobi te njihovog interakcijskog utjecaja na usamljenost i samoću, te t-testovi za nezavisne uzorke u svrhu ispitiva-

TABLE 1. Basic descriptive parameters of examined variables (N=325)

	M	SD	Range
Loneliness	2.0	0.85	1.00 – 4.82
Preference for Solitude	2.6	0.78	1.00 – 4.91
Life Satisfaction	4.9	1.05	1.20 – 7.00
Self-esteem	4.0	0.62	1.88 – 5.00
Purpose in Life	91.58	12.53	45 – 115

group. The data were collected individually. Participants filled out questionnaires by themselves in the presence of the researcher or, if necessary, the researcher read the questions and items to the participant. The administration of the questionnaire lasted between 20 and 35 minutes.

RESULTS

Basic descriptive parameters

The basic descriptive data of the examined variables are presented in Table 1.

From the overview of the means on all measurements, it can be noticed that the results on the loneliness and preference for solitude scales are moved toward lower values, while the results on the life satisfaction, self-esteem, and purpose in life scales are shifted toward higher values. These results are not surprising given that the sample of this research is not clinical.

Differences and correlations of loneliness and preference for solitude with socio-demographic characteristics

In order to answer the first research problem, i.e. to examine differences and correlation of loneliness and preference for solitude with some socio-demographic variables, Pearson's coefficients of correlation of loneliness and solitude with age and years of education were calculated. Besides, the two-way ANOVAs for testing the main effects of gender and age and the effect of their interaction on loneliness and solitude, and t-tests independent by groups for testing the differences in loneliness and solitude with respect to marital or partnership status, were also conducted.

The correlation of age with loneliness (.10) and preference for solitude (-.02) was not significant ($p > .05$), while the years of education as an indicator of the level of education signifinja razlika u usamljenosti i samoći s obzirom na bračni, točnije, partnerski status.

Povezanost *dobi* s usamljenošću (,10) i preferiranom samoćom (-,02) nije bila značajna (p> ,05), dok su završene *godine školovanja* kao indikator stupnja obrazovanja značajno korelirale i s usamljenošću (-,17; p <,01) i sa samoćom (,14; p <,05). Kako su godine školovanja bile značajno negativno povezane s dobi (-,31), tj. starije osobe ovoga uzorka bile su manje obrazovane, provjerene su i korelacije usamljenosti i samoće s godinama školovanja, uz kontrolu dobi. I uz kontrolu dobi, povezanost godina školovanja s usamljenošću (-,14; p <,05) i sa samoćom (,13, p <,05), iako niža, ostala je značajna, sugerirajući da su obrazovanije osobe manje usamljene i da više preferiraju samoću.

Kako bi se provjerile spolne i dobne razlike u usamljenosti i preferiranoj samoći, izračunata je dvosmjerna analiza varijance sa spolom i dobi (osobe mlađe, srednje i starije odrasle dobi) kao nezavisnim varijablama te njihovim interakcijskim utjecajem, te s usamljenošću i preferiranom samoćom kao zavisnim varijablama (tablica 2). Za potrebe ove analize uzorak je podijeljen u tri dobne podskupine: mlađu (N = 108, raspon dobi: 25 – 40 godina, M = 33,3, SD = 4,85), skupinu srednje dobi (N = 115, raspon dobi: 41 – 60 godina, M = 52,7, SD = 6,52) i skupinu starije dobi (N = 102, raspon dobi; 61 – 70 godina, M = 67,2, SD = 3,8). Ni za usamljenost ni za preferiranu samoću nije utvrđen značajan glavni učinak ni spola, ni dobi niti njihove interakcije. Nadalje, provjereno je postoje li razlike u usamljenosti i preferiranoj samoći s obzirom na bračni status. Zbog neraz-

cantly correlated both with loneliness (-.17; p < .01) and solitude (.14, p < .05). As the years of education significantly negatively correlated with age (- .31), i.e. older people of this sample were less educated, the correlations of loneliness and solitude with years of education, after controlling for age, were also calculated. After controlling for age, the correlation of years of education with loneliness (-.14; p < .05) and solitude (.13, p < .05), though lower, remained significant, suggesting that people with a higher level of education are less lonely and have a higher preference for solitude.

In order to test the gender and age differences in loneliness and preference for solitude, a two-way ANOVAs with gender and age (young, middle-aged, and older adults) as independent variables and their interactive effect, and with loneliness and preference for solitude as dependent variables, were conducted (Table 2). For the purposes of this analysis, the sample is divided into three age groups: young adults (N = 108, age range: 25-40 years, M = 33.3, SD = 4.85), middle-age adults (N = 115, age range : 41 – 60 years, M = 52.7, SD = 6.52) and older adults (N = 102, age range: 61-70 years, M = 67.2, SD = 3.8). The significant main effect of gender, age, or their interaction was not obtained either for loneliness or for preference for solitude.

Furthermore, the differences in loneliness and preference for solitude with regard to marital status were tested. Due to a disproportionally larger number of married participants compared to other categories of marital status (i.e. cohabitating, single, divorced and widowed participants), for the purposes of this analysis,

TABLE 2. Means and the results of two-way ANOVAs (gender x age) for loneliness and preference for solitude

	Gender		Age			ANOVA		
	Men M	Women M	Young M	Middle-aged M	Older M	Gender $F_{1,323}^{a}$	Age $F_{2,322}^{a}$	Gender x Age $F_{2,322}^{a}$
Loneliness	2.00	2.21	2.01	2.15	2.18	0.87	1.03	0.33
Preference for Solitude	2.51	2.67	2.61	2.65	2.59	1.24	1.12	2.53

[a]p> .05

mjerno većeg broja sudionika u braku u odnosu na ostale kategorije bračnog statusa (tj. one u nevjenčanoj zajednici, samce, razvedene i udovce), za potrebe ove analize sudionici su podijeljeni u dvije skupine: one u partnerskoj vezi (u bračnoj zajednici i nevjenčanoj vezi; N=247) i one koji nisu u vezi (samci, razvedeni i udovci; N=78).

Rezultati t-testova za nezavisne uzorke pokazali su da razlike između tih dviju skupina u usamljenosti i samoći nisu značajne (tablica 3).

Povezanosti usamljenosti i preferirane samoće s varijablama dobrobiti

Glavni problem ovoga istraživanja bio je usporediti smjer i jačinu povezanosti usamljenosti i preferirane samoće sa zadovoljstvom životom, samopoštovanjem i smislom života. Rezultati korelacijskih analiza prikazani su u tablici 4.

Rezultati su pokazali da su usamljenost i preferirana samoća značajno te relativno nisko pozitivno povezane ukazujući da usamljenije osobe više preferiraju samoću. U skladu s očekivanjima usamljenost značajno negativno korelira sa sva tri ispitana aspekta dobrobiti. Te su korelacije međusobno vrlo slične i umje-

the participants were divided into two groups: those having partners (married and cohabitating; N=247) and those without partners (single, divorced and widowed; N=78).

The results of t-tests independent by groups showed that differences between these two groups in loneliness and solitude are not significant (Table 3).

Correlations of loneliness and preference for solitude with well-being variables

The main problem of this research was to compare the direction and strength of the correlations of loneliness and preference for solitude with life satisfaction, self-esteem, and purpose in life. The correlation analysis results are shown in Table 4.

The results have shown that there is a significant and relatively low positive correlation between loneliness and preference for solitude, suggesting that lonelier people have higher preference for solitude. In line with expectations, loneliness significantly negatively correlates with all three examined aspects of well-being. These correlations are very similar and moderately high. Contrary to expectations,

TABLE 3. Means and the results of testing the differences in loneliness and preference for solitude regarding partnership status

	Have partner M	Do not have partner M	$t_{1,323}$	p
Loneliness	2.09	1.93	1.32	.18
Preference for Solitude	2.52	2.72	1.77	.08

TABLE 4. Correlations of examined variables (N=325)

	1.	2.	3.	4.
1. Loneliness	1.00			
2. Preference for Solitude	.27**	1.00		
3. Life Satisfaction	-.42**	-.22** (-.11)	1.00	
4. Self-esteem	-.48**	-.22** (-.01)	.54**	1.00
5. Purpose in Life	-.48**	-.14* (-.10)	.65**	.59**

*p< .05, **p< .01

Note: The brackets contain coefficients of partial correlations of preference for solitude with well-being variables, after controlling for loneliness reno visoke. Suprotno očekivanju, preferirana samoća je također značajno negativno korelirala sa životnim zadovoljstvom, samopoštovanjem i smislom života. Te su korelacije ipak bile značajno niže (p <,05) u usporedbi s korelacijama usamljenosti s istim aspektima dobrobiti. Dakle, dobiveni rezultati pokazuju da su usamljenije osobe, kao i one koje preferiraju samoću, manje zadovoljne životom, imaju manje samopoštovanje i život doživljavaju manje smislenim. Ta je negativna veza s ispitanim aspektima subjektivne i psihološke dobrobiti ipak jača za usamljenost nego za preferiranu samoću. Međutim, koeficijenti parcijalne povezanosti preferirane samoće sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života, uz kontrolu usamljenosti, nisu više bili značajni. To ukazuje na značajnu medijatorsku ulogu usamljenosti u odnosu preferirane samoće i ispitanih aspekata dobrobiti.

Najveće su korelacije utvrđene između pojedinih aspekata dobrobiti (tj. životnog zadovoljstva, samopoštovanja i smisla života) te su, što je i logično, bile pozitivne te umjereno visoke.

Povezanosti usamljenosti i preferirane samoće s varijablama dobrobiti u tri dobne podskupine

U tablici 5 prikazani su koeficijenti korelacije usamljenosti i preferirane samoće sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života u tri dobne podskupine.

Iz tablice 5 vidljivo je da u sve tri dobne podskupine usamljenost značajno negativno i umjereno visoko korelira sa zadovoljstvom životom, samopoštovanjem i smislom života. Te su korelacije u tri podskupine po veličini dosta slične. Međutim, razlike su vidljive prigodom usporedbe povezanosti preferirane samoće s tri aspekta dobrobiti i s usamljenošću u tri podskupine. U skupini mlađih odraslih preferirana samoća je značajno, i to negativno, korelirala samo sa za-

preference for solitude also significantly negatively correlated with life satisfaction, self-esteem, and purpose in life. These correlations were, however, significantly lower ($p < .05$) compared to the correlations of loneliness with the same aspects of well-being. Thus, the results show that more lonely people, as well as those who prefer solitude more, are less satisfied with their life, have lower self-esteem and find less purpose in life. This negative relationship with the aspects of subjective and psychological well-being is, however, stronger for loneliness compared to preference for solitude. However, coefficients of partial correlations of preference for solitude with life satisfaction, self-esteem, and purpose in life, after controlling for loneliness, were no longer significant. This points to a significant mediation role of loneliness in the relationship between preference for solitude and examined aspects of well-being.

Different aspects of well-being (i.e. life satisfaction, self-esteem, and purpose in life) were highly inter-correlated. Logically, these correlations were positive and moderately high.

Correlations of loneliness and preference for solitude with well-being variables in three age subgroups

Table 5 shows coefficients of correlation of loneliness and preference for solitude with life satisfaction, self-esteem, and purpose in life in three age subgroups.

From Table 5 it could be seen that in all three subgroups loneliness correlates significantly negatively and moderately highly with life satisfaction, self-esteem, and purpose in life. These correlations in three subgroups are quite similar. However, differences are apparent when comparing the correlations of preference for solitude with three aspects of well-being and loneliness in three subgroups. In young adults, the preference for solitude significantly, and

TABLE 5. Correlations of loneliness and preference for solitude with life satisfaction, self-esteem, and purpose in life in three age groups

	YOUNG ADULTS (N=108)		MIDDLE-AGED (N=115)		OLDER ADULTS (N=102)	
	Loneliness	**Preference for Solitude**	**Loneliness**	**Preference for Solitude**	**Loneliness**	**Preference for Solitude**
Life Satisfaction	-.43**	-.21*	-.36**	-.17	-.48**	-.30**
Self-esteem	-.45**	-.08	-.53**	-.28**	-.43**	-.32**
Purpose in Life	-.50**	-.13	-.44**	-.07	-.49**	-.28**
Loneliness	---	.14	---	.26**	---	.48**

*p< .05, **p< .01

dovoljstvom životom. U skupini osoba srednje odrasle dobi preferirana je samoća značajno, i opet negativno, korelirala sa samopoštovanjem, a značajno pozitivno s usamljenošću. U usporedbi s ovim mlađim dobnim podskupinama, suprotno očekivanju, preferirana je samoća bila u najužoj vezi s ispitanim aspektima dobrobiti i s usamljenošću u podskupini starijih osoba. Te su povezanosti bile značajne i umjereno visoke pri čemu su korelacije sa zadovoljstvom životom, samopoštovanjem i smislom života bile negativne, a s usamljenošću povezanost je bila pozitivna.

RASPRAVA

Glavni je cilj provedenog istraživanja bio usporediti razlike u odnosu usamljenosti i preferirane samoće sa životnim zadovoljstvom kao aspektom subjektivne dobrobiti te samopoštovanjem i doživljajem smisla života kao aspektima psihološke dobrobiti u dobno heterogenom uzorku odraslih osoba. Rezultati su, sukladno očekivanju, pokazali da je usamljenost kao neugodno subjektivno iskustvo značajno negativno povezana sa životnim zadovoljstvom, samopoštovanjem i doživljajem smisla života. Ovi nalazi koji ukazuju na to da su usamljenije osobe manje zadovoljne životom i da ga doživljavaju manje smislenim te da imaju niže samopoštovanje sasvim su razumljivi uzimajući u obzir važnost koju interpersonalni odnosi imaju za dobrobit pojedinca. Deci i Ryan (57), primjerice, u svojoj teoriji samoodređenja

negatively, correlated only with life satisfaction. In a middle-aged group, preference for solitude significantly, and again negatively, correlated with self-esteem, and significantly positively with loneliness. Compared to these two younger age groups, contrary to expectation, preference for solitude was most strongly associated with the examined aspects of well-being and loneliness in the group of older adults. These correlations were significant and moderately high, with correlations with life satisfaction, self-esteem, and purpose in life being negative, while correlation with loneliness was positive.

DISSCUSION

The main aim of this study was to compare differences in the relationship of loneliness and preference for solitude with life satisfaction as an aspect of subjective well-being, and self-esteem and purpose in life as aspects of psychological well-being in a sample of adults of different ages. The results, as expected, have shown that loneliness as an unpleasant subjective experience significantly negatively correlated with life satisfaction, self-esteem, and purpose in life. These findings suggesting that lonelier people are less satisfied with their life, find it less meaningful, and have lower self-esteem are quite understandable given the importance that interpersonal relationships have for the well-being of individuals. Deci and Ryan (57), for example, in their self-determination theory denote a need for relatedness, that is, potrebu za povezanošću, tj. za bliskim i zadovoljavajućim odnosima s drugima, spominju kao jednu od tri osnovne psihološke potrebe koja je nužna za optimalno funkcioniranje i dobrobit pojedinca. Stoga je i očekivano da će se percipirani manjak u socijalnim odnosima i nezadovoljena potreba za željenom količinom i kvalitetom socijalnih kontakata negativno odraziti na dobrobit pojedinca, kako na procjenu zadovoljstva vlastitim životom, kao komponentu subjektivne dobrobiti, tako i na samopoštovanje i doživljaj životne svrhe i smisla, kao komponente psihološke dobrobiti. Dobiveni rezultati u skladu su s rezultatima drugih istraživanja o povezanosti usamljenosti s nižim zadovoljstvom životom, nižim samopoštovanjem, doživljajem da je život manje smislen i sretan, i to u različitim dobnim skupinama (24,30-32). O negativnom utjecaju usamljenosti na psihološku dobrobit i prilagodbu svjedoče i rezultati drugih istraživanja koja su potvrdila povezanost usamljenosti s depresivnošću (20-23), anksioznošću, neuroticizmom, pesimizmom (23-25). S druge strane, očekivana neznačajna ili pozitivna veza preferirane samoće i ispitanih aspekata dobrobiti ovim istraživanjem nije potvrđena. Točnije, pokazalo se da preferirana samoća, kao i usamljenost, značajno negativno korelira sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života ukazujući da su osobe koje više vole provoditi vrijeme same manje zadovoljne životom i u njemu nalaze manje smisla te da imaju nepovoljniju sliku o sebi. U ovom istraživanju nije ispitana količina vremena koju ljudi provode sami ni razlozi tome. Stoga se može samo pretpostaviti da osobe koje preferiraju samoću uistinu i provode više vremena same te da se možda zato i osjećaju usamljenije što onda može imati negativan učinak na njihovu dobrobit. U prilog tome je i utvrđena značajna i pozitivna korelacija preferirane samoće i usamljenosti utvrđena u ispitanom uzorku odraslih osoba. Moguće je i obrnuto, tj. da usamljenije osobe zbog lošijih socijalnih vještina,

for close and satisfactory relationships with others, as one of the three basic psychological needs necessary for optimal functioning and well-being of an individual. It is therefore expected that the perceived deficit in social relations and the unsatisfied need for the desired quantity and quality of social contacts will have a negative impact on the well-being of an individual. Namely, it could negatively affect the evaluation of satisfaction with one's own life, as a component of subjective well-being, as well as self-esteem and experience of life purpose and meaning, as components of psychological well-being. The results obtained in this study are consistent with the results of other studies on the association of loneliness with lower life satisfaction, lower self-esteem, experience of life as less meaningful and happy found in different age groups (24, 30-32). The negative impact of loneliness on psychological well-being and adaptation also demonstrates the results of other studies that confirmed the relationship of loneliness with depression (20-23), anxiety, neuroticism, and pessimism (23-25).

On the other hand, the expected non-significant or positive relationship between preference for solitude and examined aspects of well-being has not been confirmed by the results of this study. More specifically, it has been shown that preference for solitude, like loneliness, correlates significantly negatively with life satisfaction, self-esteem, and purpose in life, suggesting that people who prefer to spend their time alone are less satisfied with their life, find it less meaningful, and have a less favourable self-image. In this study, the amount of time that people spend alone or the reasons for doing so have not been investigated. Therefore, we can only hypothesize that people who prefer solitude more actually spend more time alone. So, they may feel lonelier, which can negatively affect their well-being. A significant and positive correlation between preference for solitude and loneliness found in the sample of this study is in favour of this assumption. In-socijalne anksioznosti, smanjene poticajne vrijednosti socijalnih interakcija i drugih razloga više pribjegavaju samoći kako bi se odmorile od socijalnih pritisaka ili kako bi se suočile sa svojom usamljenošću kada u samoći procjenjuju uzroke svoje usamljenosti i ponašanja koja su koristile u ranijim socijalnim odnosima (1,2,41).

Utvrđene su korelacije preferirane samoće s mjerama dobrobiti bile značajno niže u odnosu na korelacije usamljenosti s ovim mjerama, pokazujući da je usamljenost ipak u užoj vezi s negativnim aspektima dobrobiti nego preferencija samoće. Međutim, kada je kontroliran utjecaj usamljenosti, povezanost preferirane samoće sa životnim zadovoljstvom, samopoštovanjem i doživljajem smisla života više nije bila značajna. To ukazuje da je usamljenost medijator u odnosu preferirane samoće i ispitanih aspekata dobrobiti, odnosno da preferirana samoća samo onda kada vodi usamljenosti negativno utječe na dobrobit pojedinca.

Iako u ovome istraživanju nije ispitano koliko vremena sudionici uistinu provode sami već samo izraženost sklonosti tome da provode vrijeme u samoći, općenito se može reći da rezultati ovoga istraživanja više idu u prilog ranijim empirijskim nalazima koji su pokazali da samoća negativno utječe na afektivno stanje i dobrobit pojedinca nego u prilog onima koji govore o blagotvornim učincima samoće na dobrobit. Primjerice, u nekim je istraživanjima utvrđena povezanost samoće sa izraženijom sramežljivošću, depresijom i inhibicijom te nižim samopoštovanjem (36). Nadalje, Larson (33) na temelju pregleda većeg broja istraživanja zaključuje da većina ljudi, neovisno o dobi ili kulturnoj pripadnosti, navodi da se osjeća usamljenije i nesretnije kada su sami nego kada su u društvu drugih. Neki empirijski nalazi ukazuju na negativan utjecaj koji velika količina vremena provedenog u samoći može imati na zdravlje i dobrobit odraslih i starijih osoba (39). Međutim, čini se da u negativnom odnosu preferirane samoće

verse explanation is also possible, i.e. that lonely individuals, due to their poorer social skills, social anxiety, diminished stimulating value of social interactions, and other reasons, are more prone to being alone in order to escape social pressures or to cope with their loneliness by solitary assessment of the reasons for their loneliness and behaviours that they used in earlier social interactions (1,2,41).

The correlation of preference for solitude with the measures of well-being was found to be significantly lower compared to the correlations of loneliness with the same measurements, demonstrating that loneliness is more closely associated with negative aspects of well-being than a preference for solitude. However, after controlling for loneliness, the correlations of preference for solitude with life satisfaction, self-esteem, and purpose in life were no longer significant. This suggests that loneliness is the mediator in the relationship between a preference for solitude and the examined aspects of well-being, that is, preference for solitude negatively affects the well-being of an individual only when it leads to loneliness.

Although this study has not investigated how much time participants actually spend alone, but merely their tendency to spend time in solitude, it can generally be said that the results of this research are more in line with earlier empirical findings that have shown that solitude negatively affects the emotional state and well-being than with those that demonstrated the beneficial effects of solitude on well-being. For example, some studies demonstrated the association of solitude with greater shyness, depression, and inhibition and lower self-esteem (36). Furthermore, Larson (33), based on a review of a number of studies, concludes that most people, regardless of their age or culture, report that they feel lonelier and unhappier when they are alone than when they are in the company of other people. Some empirical findings demonstrate a negative impact that a large amount of i dobrobiti utvrđenom u ovom uzorku sudionika posreduje doživljaj usamljenosti. Vjerojatno bismo o odnosu preferirane samoće i dobrobiti s većom sigurnošću mogli zaključivati kada bismo imali podatak i o količini vremena koju pojedinci provode sami i o razlozima zbog kojih pribjegavaju samoći pa se ovo može istaknuti kao sugestija za buduća istraživanja.

Kada je uspoređena jačina povezanosti usamljenosti i preferirane samoće, te povezanost jedne i druge s tri ispitana aspekta dobrobiti u podskupinama osoba mlađe, srednje i starije odrasle dobi, pokazalo se da su koeficijenti povezanosti usamljenosti sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života dosta slični u tri dobne podskupine. To je i očekivano s obzirom da se može pretpostaviti da je iskustvo usamljenosti u kvalitativnom smislu neugodno i bolno u svakom životnom razdoblju pa bi stoga i njegov utjecaj na subjektivnu i psihološku dobrobit trebao biti sličan u različitim razdobljima odrasle dobi. U sve tri podskupine te su povezanosti usamljenosti s aspektima dobrobiti bile umjereno visoke i negativne ukazujući na manje zadovoljstvo životom, niže samopoštovanje i manji doživljaj smisla života u usamljenijih osoba i mlađe, i srednje i starije odrasle dobi. S druge strane, sukladno razvojnim očekivanjima o većoj selektivnosti u socioemocionalnim odnosima te manjoj socijalnoj mreži u starijoj dobi (16), o prihvaćanju različitih socijalnih i emocionalnih gubitaka kao gotovo normativnih događaja u starijoj dobi (2) i sukladno nekim ranijim nalazima o lakšem prihvaćanju samoće i njezinom manje prijetećem utjecaju na dobrobit starijih osoba (33,39), pretpostavljeno je da će preferirana samoća biti jače pozitivno odnosno manje negativno povezana s ispitanim aspektima dobrobiti u starijih u odnosu na mlađe dobne skupine odraslih. Međutim, rezultati ovoga istraživanja ovu pretpostavku nisu potvrdili. Upravo suprotno, pokazalo se da je preferirana samoća u najužoj vezi s ispi-

time spent in solitude can have on the health and well-being of adults and older people (39).

However, it seems that the experience of loneliness mediates in the negative relationship between a preference for solitude and well-being found in the sample of this study. We could probably discuss the relationship between preference for solitude and well-being with more certainty if we had information about the amount of time people spend alone and the reasons they resort to solitude, so this can be pointed out as a suggestion for future research.

The comparison of the strength of the association between loneliness and preference for solitude, and the comparison of the relationship of one and the other with the three examined aspects of well-being in the groups of young, middle-aged, and older adults, have revealed that the coefficients of correlation of loneliness with life satisfaction, self-esteem, and purpose in life are quite similar in three age groups. This is expected, since it can be assumed that the experience of loneliness is qualitatively unpleasant and painful in each period of life. Therefore, its impact on subjective and psychological well-being should be similar in different periods of adulthood. In all three age groups, those correlations of loneliness with aspects of well-being were moderately high and negative, pointing to lower life satisfaction, lower self-esteem, and the experience of life as less meaningful for lonelier young, middle-aged, or older adults. On the other hand, it was assumed that the preference for solitude will be more positively or less negatively related to examined aspects of well-being in older age groups of adults when compared to younger ones. This is in accordance to the developmental expectations of greater selectivity in socioemotional relationships and the smaller social network in old age (16), acceptance of different social and emotional losses as almost normative events for older people (2), as well as in accordance with some earlier findings of easier acceptance of tanim aspektima dobrobiti i s usamljenošću upravo u skupini starijih osoba. Pri tome je veća sklonost samoći bila povezana s manjim zadovoljstvom životom, nižim samopoštovanjem i s nalaženjem manje smisla u životu, kao i s izraženijim doživljajem usamljenosti. Ovi nalazi ukazuju na starije osobe sklone osamljivanju (bez obzira na razloge tome) kao posebno vulnerabilnu skupinu u pogledu ugrožene subjektivne i psihološke dobrobiti. O razlozima tome mogli bismo s većim pouzdanjem govoriti kada bismo imali podatak o funkcijama takve preferirane samoće u starijih osoba, odnosno kada bismo znali služi li povlačenje u osamu lakšem suočavanju s usamljenošću, samorefleksiji, relaksaciji, duhovnom traženju, postizanju unutarnjeg mira, učenju, kreativnom izražavanju ili nekom drugom cilju, što bi moglo utjecati na odnos takvog dobrovoljnog osamljivanja i dobrobiti pojedinca.

Rezultati ispitivanja razlika u usamljenosti i preferiranoj samoći s obzirom na neke sociodemografske varijable (spol, dob, obrazovanje i partnerski status), dijelom suprotno očekivanjima, pokazali su da ove sociodemografske varijable općenito nemaju značajniju ulogu u objašnjenju individualnih razlika u usamljenosti i samoći u ispitanom uzorku odraslih osoba. Konkretno, nisu utvrđene značajne razlike s obzirom na spol, dob i njihovu interakciju. Također, ni razlike između osoba u partnerskoj vezi i onih koje nisu u vezi u usamljenosti i samoći nisu bile značajne. Ovi su rezultati samo dijelom sukladni nekim ranijim nalazima. Primjerice, u nekim ranijim studijama također nisu utvrđene razlike između starijih i osoba mlađe odrasle dobi ni u globalnoj usamljenosti ni u njezinim različitim dimenzijama, kao što su socijalna i emocionalna usamljenost (58). Nadalje, slične razine doživljaja usamljenosti u muškaraca i žena utvrđene u ovom istraživanju sukladne su nekim ranijim nalazima koji također nisu potvrdili značajne

solitude and its less threatening impact on the well-being of older people (33,39). However, the results of this study did not confirm this assumption. On the contrary, it has been shown that a preference for solitude is most closely related to the examined aspects of well-being and loneliness in the group of older subjects. The greater tendency to solitude correlated with lower life satisfaction, lower self-esteem, and finding less meaning in life, as well as with increased experience of loneliness. These findings suggest that older people prone to solitude (regardless of the reasons for this) are a particularly vulnerable group in terms of endangered subjective and psychological well-being. We could discuss with greater confidence the reasons for this if we had information on the functions of such a preference for solitude in older people, that is, if we knew whether this withdrawal from others serves as an easier mechanism for coping with loneliness, self-reflection, relaxation, spiritual search, reaching inner peace, learning, creative expression, or some other purpose, which could affect the relationship between such voluntary isolation and the well-being of the individual.

The results of testing the differences in loneliness and preference for solitude with respect to some socio-demographic variables (gender, age, education, and partnership status), partly contrary to expectations, have shown that these socio-demographic variables generally have no substantial role in explaining individual differences in loneliness and solitude in the sample of this study. Specifically, no significant differences were found with respect to gender, age, and their interaction. Besides, the differences between people with partners and those without partners in loneliness and solitude were not significant. These results are only partly consistent with some earlier findings. For example, some earlier studies have also found no differences between older and younger adults, neither in global loneliness nor in its different spolne razlike (10-12). Jedino je povezanost godina školovanja s usamljenošću i samoćom, iako niska, bila značajna, i uz kontrolu dobi. Ta je povezanost s usamljenošću bila negativna, a sa samoćom pozitivna ukazujući na to da se obrazovanije osobe osjećaju manje usamljeno i da više preferiraju samoću. Moguće je da obrazovanije osobe, odnosno one višeg SES-a, uspješnije zadovoljavaju svoje socioemocionalne potrebe, vjerojatno zbog bogatijih osobnih i materijalnih resursa na koje se mogu osloniti (59). Ovaj je nalaz u skladu s očekivanjem i s nalazima nekih ranijih istraživanja (2,59). Veća sklonost samoći obrazovanijih osoba možda bi se mogla objasniti njihovom većom potrebom za učenjem, umjetničkim i kreativnim aktivnostima, kontemplacijom i sličnim pobudama koje je lakše ostvariti u samoći nego socijalnim aktivnostima (59). Različiti smjer povezanosti usamljenosti i preferirane samoće sa stupnjem obrazovanja još je jedan dokaz u prilog zaključku da su usamljenost i preferirana samoća, premda povezani, ipak različiti konstrukti.

Kao glavno ograničenje ovoga istraživanja može se navesti relativno mali i prigodni uzorak odraslih te transverzalni nacrt istraživanja. Neke sugestije za buduća istraživanja već su ranije navedene, a odnose se na ispitivanje i količine vremena koju ljudi provode sami te razloga zbog kojih to čine, kako bi se potpunije zahvatio fenomen samoće i njegov utjecaj na dobrobit. Uz to, za pouzdaniju provjeru odnosa usamljenosti s varijablama dobrobiti, kao i provjeru dobnih i spolnih razlika te utjecaja partnerskog statusa na usamljenost, u budućim bi istraživanjima, uz jednodimenzionalne, bilo uputno koristiti i višedimenzionalne mjere usamljenosti (npr. emocionalne i socijalne), budući da su neka istraživanja utvrdila drugačiji smjer tih razlika za različite dimenzije usamljenosti ili postojanje značajnih razlika s obzirom na pojedine sociodemografske varijable samo za neke dimenzije

dimensions, such as social and emotional loneliness (58). Furthermore, similar levels of the experience of loneliness in men and women found in this research are consistent with some earlier findings that also did not confirm significant gender differences (10-12). Only the association of years of education with loneliness and solitude, although low, was significant, even after controlling the age of participants. This correlation with loneliness was negative, while that with solitude was positive, suggesting that people with higher levels of education feel less lonely and prefer solitude more. It is possible that people with higher levels of education, i.e. higher SES, meet their socioemotional needs more successfully, probably due to their richer personal and material resources they can rely on (59). This finding is in line with the expectations and findings of some earlier research (2,59). A greater affinity to be alone in more educated people could maybe be explained by their stronger need for learning, artistic and creative activities, contemplation, and similar motives, which are easier to meet in solitude than through social activities (59). A different direction of correlations of loneliness and preference for solitude with the level of education is yet another argument in support of the conclusion that loneliness and preference for solitude, although related, are still different constructs.

The main limitations of this research are a relatively small convenience sample of adults and a cross-sectional research design. Some suggestions for future research, which have already been mentioned, refer to the exploration of the amount of time people spend alone, and the reasons for which they do so, in order to comprehend the phenomenon of solitude and its effect on well-being more thoroughly. Besides, for a more reliable test of the relationship between loneliness and well-being variables, as well as age and gender differences and the impact of partnership status on loneliness, future research should use multidimensional measures usamljenosti. Također, preporučuju se longitudinalna istraživanja na većim i reprezentativnijim uzorcima koja mogu dati spoznaje o pravim dobnim promjenama u usamljenosti i preferiranoj samoći tijekom različitih životnih razdoblja.

Valjalo bi istaknuti i moguće praktične implikacije rezultata ovoga istraživanja. Sve intervencije i programi namijenjeni boljem razumijevanju iskustva i uzroka usamljenosti, te načina njenog reduciranja, od iznimne su važnosti imajući u vidu koliko je iskustvo usamljenosti bolno i koliko može ugroziti zdravlje i dobrobit kronično usamljenih ljudi. Neke od tih intervencija, kao što je, primjerice, trening socijalnih vještina, mogu biti usmjerene širim skupinama, a druge poput individualnog i grupnog terapijskog rada s ciljem redukcije doživljaja usamljenosti i popratnih kliničkim simptoma, mogu biti namijenjene posebno vulnerabilnim skupinama.

U pogledu tendencije provođenja vremena u samoći rezultati ukazuju da ona može biti nepovoljna za dobrobit pojedinca ako vodi doživljaju usamljenosti. Međutim, osvješćivanje potencijala koje samoća ima za kreativan rad, učenje, bolje upoznavanje sebe, kontemplaciju itd. može pomoći ljudima da je dožive na pozitivan način te ona onda neće rezultirati usamljenošću. To je posebno važno kod starijih osoba koje općenito, u odnosu na mlađe dobne skupine, provode više vremena same.

ZAKLJUČAK

Zaključno se može reći da, bez obzira na ograničenja, ovo istraživanje doprinosi spoznajama o odnosu usamljenosti i preferirane samoće s različitim aspektima dobrobiti u odraslih osoba. Tim više što su ovakva istraživanja u populaciji odraslih osoba u nas vrlo rijetka. Rezultati ovoga istraživanja pokazali su da su i usamljenost i preferirana samoća značajno ne-

of loneliness (e.g. emotional and social loneliness) besides one-dimensional ones. Namely, in some research a distinct direction of these differences for the different dimensions of loneliness was found, or significant differences with respect to some socio-demographic variables only for some dimensions of loneliness. Additionally, longitudinal studies on larger and more representative samples are also recommended since they can give insights into real age-related changes in loneliness and a preference for solitude during different periods of life.

Possible practical implications of the results of this research should also be emphasized. All interventions and programs aimed towards understanding the experience and the causes of loneliness, and the way to reduce it, are of utmost importance given how painful loneliness is and how it can endanger the health and well-being of chronically lonely people. Some of these interventions, such as training of social skills, may be organized for larger groups of people, while others, such as individual and group therapy with the aim of reducing the experience of loneliness and accompanying clinical symptoms, may be targeted at particularly vulnerable individuals.

With regard to the tendency of spending time alone, the results suggest that this tendency may be unfavourable for the well-being of the individual if it leads to loneliness. However, awareness of the potentials that solitude has for creative work, learning, self-understanding, contemplation, etc. can help people to perceive it in a positive way. Then, it will not lead to loneliness. This is especially important for older people who, in general, spend more time alone compared to younger age groups.

CONCLUSION

In conclusion, it can be stated that, regardless of limitations, this study contributes to the knowledge of the relationship of loneliness gativno povezane sa zadovoljstvom životom, samopoštovanjem i doživljajem smisla života u ispitanom uzorku odraslih osoba, iako su te povezanosti bile veće za usamljenost nego za preferiranu samoću. Rezultati ukazuju i na potencijalnu medijatorsku ulogu usamljenosti u odnosu preferirane samoće i ispitanih aspekata subjektivne i psihološke dobrobiti. Uloga ispitanih sociodemografskih varijabli, osim stupnja obrazovanja, u objašnjenju individualnih razlika u usamljenosti i preferiranoj samoći nije se pokazala značajnom. S druge strane, rezultati ukazuju na razlike u jačini povezanosti preferirane samoće s usamljenošću, zadovoljstvom životom, samopoštovanjem i doživljajem smisla života u različitim dobnim podskupinama odraslih osoba. Čini se da je pritom najstarija skupina najosjetljivija na negativan utjecaj svojevoljnog povlačenja u samoću na subjektivnu i psihološku dobrobit. Stoga bi posebno starije osobe mogle profitirati od osvješćivanja pozitivnih strana aktivnosti koje se mogu obavljati u odsutnosti drugih, a koje mogu poboljšati kvalitetu života, dok odrasli svih dobnih skupina, posebno oni s povećanim rizikom razvoja kronične usamljenosti, mogu imati koristi od intervencija i programa usmjerenih smanjenju usamljenosti.

and preference for solitude with different aspects of well-being in adults, especially since such studies of the Croatian adult population are very rare. The results of this research have shown that both loneliness and preference for solitude significantly negatively relate to life satisfaction, self-esteem, and purpose in life in the adult sample of this research, although these correlations were higher for loneliness than for preference for solitude. The results also point to a potential mediation role of loneliness in the relationship between preference for solitude and the examined aspects of subjective and psychological well-being. The role of tested socio-demographic variables, with the exception of education, in explaining individual differences in loneliness and preference for solitude did not prove to be significant. On the other hand, the results demonstrate differences in the strength of the relationship of preference for solitude with loneliness, life satisfaction, self-esteem, and purpose in life in different age groups of adults. It seems that the oldest group is the most vulnerable to the negative effect of voluntary withdrawal from others on subjective and psychological well-being. For this reason, elderly people could especially benefit from the awareness of the positive side of solitary activities that can improve the quality of their lives, while adults of all age groups, especially those in greater risk of developing chronic loneliness, may benefit from various interventions and programs aimed at reducing loneliness.

LITERATURA / *REFERENCES*

1. Peplau LA, Perlman D. Loneliness: A sourcebook of current theory, research and therapy. New York: John Willey and Sons, 1982.
2. Lacković-Grgin K. Usamljenost: Fenomenologija, teorije i istraživanja. Jastrebarsko: Naklada Slap, 2008.
3. Borys S, Perlman D. Gender differences in loneliness. Pers Soc Psychol Bull 1985; 11: 63-74.
4. Medora N, Woodward JC. Loneliness among adolescent college students at a Midwestern University, Adolescence 1986; 21: 391-402.
5. Chipuer HM, Pretty GH. Facets of adolescents' loneliness: A study of rural and urban Australian youth. Australian Psychologist 2000; 35: 233-7.
6. Klarin M. Uloga socijalne podrške vršnjaka i vršnjačkih odnosa u usamljenosti preadolescenata i adolescenata. Društvena istraživanja 2004; 13: 1081-97.
7. Davis MH, Franzoi SL. Adolescent loneliness, self-disclosure, and private self-consciousness: A longitudinal investigation, J Pers Soc Psychol 1986; 51: 595-608.
8. Koenig LJ, Isaacs AM, Schwartz JAJ. Sex differences in adolescent depression and loneliness: Why are boys loneliner if girls are more depressed? J Res Pers 1994; 28: 27-43.
9. Uruk AC, Demir A. The role of peers and families in predicting the loneliness level of adolescents, J Psychol 2003; 137: 179-93.
10. Kalliopuska M, Laitinen M. Loneliness related to self-concept. Psychol Rep 1991; 69: 27-34.
11. Mahon NE, Yarcheski A, Yarcheski TJ. Differences in social support and loneliness in adolescents according to developmental stage and gender. Public Health Nurs 1994; 11: 361-8.
12. Tornstam L. Loneliness in marriage, J Soc Pers Relat 1992; 9: 197-217.
13. Goossens L. Affect, emotion, and loneliness in adolescence. In: Jackson S, Goossens L (ed). Handbook of adolescent development. Hove: Psychology Press, 2006, 51-70.
14. Klarin M. Razvoj djece u socijalnom kontekstu. Roditelji, vršnjaci, učitelji – kontekst razvoja djeteta. Jastrebarsko: Naklada Slap, 2006.
15. Hannson RO. Relational competence, relationships, and adjustment, J Pers Soc Psychol 1986; 50: 1050-8.
16. Carstensen L. Evidence for a life-span theory of socioemotional selectivity, Curr Dimensions Psychol Sci 1995; 4: 151-6.
17. Cherepanov D, Palta M, Fryback DG, Robert SA. Gender differences in health-related quality-of-life are partly explained by sociodemographic and socioeconomic variation between adult men and women in the US: Evidence from four US nationally representative data sets. Qual Life Res 2010; 19: 1115-24.
18. Dykstra PA. Loneliness among never and formerly married: The importance of supportive friendships and a desire for independence. J Gerontol Soc Sci 1995; 50: 321-9.
19. Jones WH, Hebb L. The experience of loneliness: Objective and subjective factors. Int Scope Rev 2003; 5: 41-59.
20. Adams KB, Sanders S, Auth EA. Loneliness and depression in independent living retirement communities: risk and resilience factors. Aging Mental Health 2004; 8: 475-85.
21. Cacioppo JT, Hughes ME, Waite LJ, Hawkley LC, Thisted RA. Loneliness as a specific risk factor for depressive symptoms: cross-sectional and longitudinal analyses. Psychol Aging 2006; 21: 140-51.
22. Ó Luanaigh C, Lawlor BA. Loneliness and the health of older people. Int J Geriatr Psychiatry 2008; 23: 1213-21.
23. Russell D, Peplau LA, Cutrona CE. The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence, J Pers Soc Psychol 1980; 39: 472-80.
24. Davis SF, Hanson H, Edson R, Ziegler C. The relationships between optimism-pesimism, loneliness, and level of self-esteem in college students, Coll Students J 1992; 26: 244-7.
25. Russell D. Loneliness Scale (version 3): Reliability, validity, and factor structure, J Pers Assess 1996; 66: 20-40.
26. Hawkley LC, Masi CM, Berry JD, Cacioppo JT. Loneliness is a unique predictor of age-related differences in systolic blood pressure. Psychol Aging 2006; 21: 52-164.
27. Cacioppo JT, Hawkley LC, Bernston GG I. Do lonely days invade the nights? Potential social modulation of sleep efficiency. Psychol Sci 2002; 13: 384-7.
28. Steptoe A, Owen N, Kunz-Ebrecht SR, Brydon L. Loneliness and neuroendocrine, cardiovascular, and inflammatory stress responses in middle-aged men and women. Psychoneuroendocrinology 2004; 29: 593-611.
29. Sorkin D, Rook KS, Lu JL. Loneliness, lack of emotional support, lack of companionship and the likelihood of having a heart condition in an elderly sample. Ann Behav Med 2002; 24: 290-8.
30. McWhirter BT. Loneliness: A review of current literature with implication for counseling and research, J Couns Dev 1990; 68: 417-22.
31. Lacković-Grgin K, Penezić Z, Nekić M. Kratka verzija UCLA skale usamljenosti. In: Lacković-Grgin K, Proroković A, Ćubela V, Penezić Z (eds). Zbirka psihologijskih skala i upitnika, svezak 1, Zadar: Filozofski fakultet u Zadru, 2002, 77-78.
32. Lacković-Grgin K, Penezić Z, Sorić I. Struktura iskustva usamljenosti mjerene upitnikom A. Rokach. Radovi FPSP 1998; 37: 33-52.
33. Larson RW. The solitary side of life: An examination of the time people spend alone from childhood to old age. Dev Rev 1990; 10: 155-83.

34. Burger JM. Individual differences in preference for solitude, J Res Pers 1995; 29: 85-108.
35. Long CR, Seburn M, Averill JR, Moore TA. Solitude experiences: Varieties, settings, and individual differences, Pers Soc Psychol Bull 2003; 29: 578-83.
36. Sibony R. A review of currents and of the first empiric researches done by the anglosaxons on solitude (1950-1988). Psychotherapies 1998; 18: 101-8.
37. Wang JM. Preference for solitude and depressive symptoms in Chinese adolescents, Pers Individual Differ 2016; 100: 151-6.
38. Endo K, Ando S, Shimodera S *et al*. Preference for solitude, social isolation, suicidal ideation, and self-harm in adolescents, J Adolesc Health 2017; 61: 187-91.
39. Pauly T, Lay JC, Nater UM, Scott SB, Hoppmann CA. How we experience being alone: Age differences in affective and biological correlates of momentary solitude. Gerontology 2016; 63: 55-66.
40. Larson R, Lee M. The capacity to be alone as a stress buffer. J Soc Psychol 1996; 136: 5-16.
41. Rokach A. Surviving and coping with loneliness. J Psychol 1990; 124: 39-54.
42. Storr A. Solitude. London: Harper Collins Publishers, 1988.
43. Wilkins LE, Burch S. Solitude: A creative power for NP success. Kans Nurse 1999; 74: 13-14.
44. Ryan RM, Deci EL. To be happy or to be self-fulfilled: A review of research on hedonic and eudaimonic well-being. Annu Rev Psychol 2001; 52: 141-66.
45. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. J Pers Soc Psychol 1989; 57: 1069-81.
46. Allen RL, Oshagan, H. The UCLA loneliness scale: Invariance of social structural characteristics. Pers Individual Differ 1995; 19: 185-95.
47. Lacković-Grgin K, Nekić M. Adaptirana skala preferirane samoće. In: Lacković-Grgin K, Proroković A, Ćubela V, Penezić Z (eds). Zbirka psihologijskih skala i upitnika, svezak 1, Zadar: Filozofski fakultet u Zadru, 2002; 23-24.
48. Diener E, Emmons RA, Larson RJ, Griffin S. The Satisfaction with Life Scale. J Pers Assess 1985; 49: 71-6.
49. Pavot W, Diener D. Review of the Satisfaction with Life Scale. Psychol Assess 1993; 5: 164-72.
50. Bezinović P. Percepcija osobne kompetentnosti kao dimenzija samopoimanja. Doktorska disertacija, Zagreb: Filozofski fakultet, 1988.
51. Bezinović, P. Samopoštovanje i percepcija osobne kompetentnosti. Godišnjak Zavoda za psihologiju Rijeka 1993; 3: 7-12.
52. Burušić J, Tadić M. Uloga samopoštovanja u odnosu crta ličnosti i neverbalnih socijalnih vještina. Društvena istraživanja 2006; 4-5: 753-71.
53. Lacković-Grgin K. Samopoimanje mladih. Jastrebarsko: Naklada Slap, 1994.
54. Tucak I, Lacković-Grgin K, Penezić Z, Nekić M. Uloga nekih mehanizama samoevaluacije i samoregulacije u održavanju samopoštovanja. Društvena istraživanja 2007; 89: 515-31.
55. Vulić-Prtorić A. Skala smisla života. In: Ćubela Adorić V, Proroković A, Penezić Z, Tucak I, (eds). Zbirka psihologijskih skala i upitnika, svezak 3, Zadar: Sveučilište u Zadru, 2006; 49-53.
56. Bijelić L, Macuka I. Smisao života: uloga religioznosti i stavova prema smrti. Psihologijske teme 2018; 27: 159-76.
57. Deci EL, Ryan RM. The „what" and „why" of goal pursuits: Human needs and the self-determination of behavior. Psychol Inquiry 2000; 11: 227-68.
58. Green LR, Richardson DS, Lago T, Schatten-Jones EC. Network correlates of social and emotional loneliness in young and older adults, Pers Soc Psychol Bull 2001; 27: 281-8.
59. Tucak Junaković I, Nekić M, Burić I. Usamljenost i preferirana samoća kao prediktori samoprocjene zdravlja odraslih. Med Jad 2013; 43: 11-21.

Kiberohondrija – zdravstvena anksioznost uvjetovana pretraživanjem interneta

/ *Cyberchondria – Health Anxiety Related to Internet Searching*

Branka Bagarić[1], Nataša Jokić-Begić[2]

[1]Hrvatsko udruženje za bihevioralno-kognitivne terapije, Zagreb, [2]Filozofski fakultet, Odsjek za psihologiju, Zagreb, Hrvatska

/ [1]*Croatian Association for Behavioural Cognitive Treatment, Zagreb,* [2]*University of Zagreb, Faculty of Humanities and Social Sciences, Department of Psychology, Zagreb, Croatia*

[1]ORCID: https://orcid.org/0000-0002-1786-0993
[2]ORCID: https://orcid.org/0000-0003-2597-535X

Internet danas zauzima važno mjesto u prikupljanju informacija o zdravlju. Međutim, čini se da može izazvati nepotrebnu zabrinutost za zdravlje koja se naziva kiberohondrija (engl. *cybechondria*). U ovom preglednom radu opisan je konstrukt kiberohondrije te odnos kiberohondrije prema povezanim relevantnim konceptima – zdravstvenoj anksioznosti i hipohondriji. Dan je pregled nalaza istraživanja iz ovog područja koji su integrirani u tri teorijska modela različitih razina. Proširenim *biopsihosocijalno-digitalnim modelom* objašnjeno je kako biološki, psihološki i socijalni čimbenici mogu zajedno rezultirati zdravstvenom anksioznošću pri čemu je predloženo da digitalna komponenta pojačava i ubrzava opisane procese. U okviru *kognitivno-bihevioralnog modela*, pretraživanje zdravstvenih informacija na internetu konceptualizirano je kao okidač u razvoju zdravstvene anksioznosti, ali i oblik tzv. traženja razuvjerenja koje održava zdravstvenu anksioznost. Kako pretraživanje ima svoje specifičnosti u odnosu na druge oblike traženja razuvjerenja, opisan je i *model kiberohondrije* koji pojašnjava zašto se pretraživanje o zdravlju na internetu održava unatoč anksioznosti koja ga prati. Sažeto su prikazana istraživanja o potencijalnim rizičnim čimbenicima za kiberohondriju; o zdravstvenoj anksioznosti, anksioznoj osjetljivosti, netoleranciji neizvjesnosti i metakognicijama, kao i mehanizmi njihova djelovanja. Na kraju su istaknute praktične implikacije istraživanja kiberohondrije.

/ Nowadays, the Internet holds an important place in the process of gathering information regarding health. However, it seems that this can cause an unnecessary concern about health that is referred to as cyberchondria. This review article describes the construct of cyberchondria and its relationship with related relevant concepts – health anxiety and hypochondria. The article presents an overview of research results from this area that have been integrated into three theoretical models of different levels. The expanded biopsychosocial-digital model explains how biological, psychological, and social factors may together result in health anxiety, with the suggestion that the digital component intensifies and accelerates the described processes. Within the framework of the cognitive-behavioural model, searching the Internet about health information is conceptualized as a trigger in the development of health anxiety, but also as a form of reassurance seeking that reflects health anxiety. Since Internet searching has its specific aspects in comparison with other forms of reassurance seeking, the article also describes the cyberchondria model which explains why searching the Internet about health is continued despite the accompanying anxiety. The article summarizes research on potential risk factors for cyberchondria; on health anxiety, anxiety sensitivity, intolerance of uncertainty, and metacognitive beliefs, as well as their mechanisms. Finally, the article points out the practical implications of researching cyberchondria.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE:*
Branka Bagarić, mag. psih.
Hrvatsko udruženje za bihevioralno-kognitivne terapije
Šenoina 25
10000 Zagreb, Hrvatska
E-pošta: branka.bagaric1@gmail.com

KLJUČNE RIJEČI / *KEY WORDS:*
Kiberohondrija / *Cyberchondria*
Zdravstvena anksioznost / *Health anxiety*
Pretraživanje o zdravlju na internetu / *Health information seeking on the internet*
Biopsihosocijalni model / *Biopsychosocial model*
Kognitivno-bihevioralni model / *Cognitive-behavioural model*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.28

UVOD

Internet postaje sve važniji izvor informiranja o različitim temama, pa tako i o zdravlju. Više od polovice Europljana pretražuje zdravstvene informacije na internetu (1). Za gotovo 70 % korisnika internet je postao prvi izvor informacija koji će konzultirati kada imaju neko zdravstveno pitanje (2). Odgovori na pitanja o zdravlju mogu se dobiti za samo nekoliko sekundi, anonimno i uz vrlo malu cijenu, na svakom mjestu i u svako vrijeme. Zdravstvene teme o kojima korisnici najviše pretražuju na internetu su: specifične bolesti i zdravstveni problemi (66 %), medicinski tretmani i postupci (55 %), vježbanje i dijete (52 %), zdravstveni djelatnici (47 %) i lijekovi (45 %) (3). Pretraživanju su sklonije žene (4), mlađe osobe (5), osobe višeg obrazovnog i financijskog statusa (5) te lošijeg zdravlja (6).

Pretraživanje interneta radi informiranja o zdravlju razumljivo je s obzirom na društvene promjene. Zapadno društvo kao društvenu vrijednost ističe preuzimanje osobne odgovornosti za vlastito zdravlje, što podrazumijeva da pojedinac sve više aktivno sudjeluje u prepoznavanju simptoma i zbrinjavanju bolesti, odnosno održavanju zdravlja. U skladu s tim raste opće uvjerenje da moramo biti sposobni samostalno donositi odluke o zdravlju i zaključiti što je za nas najbolje. Pacijenti danas sami promišljaju o tome koji je tretman za njih najbolji te

INTRODUCTION

The Internet is becoming an increasingly important source of information on various topics, including health. More than half of Europeans search for health information on the Internet (1). For almost 70% of Internet users the Internet has become the first source they consult when they have a question regarding health (2). The answers to questions regarding health may be found in only a few seconds, anonymously, and at a very low price, in any place and at any time. Health topics the users most commonly search for are the following: specific diseases and health issues (66%), medical treatments and procedures (55%), exercise and dieting (52%), health workers (47%), and medication (45%) (3). Those more likely to search are women (4), younger people (5), highly educated and wealthier people (5), and those of poorer health (6).

Searching the Internet for health information is understandable when one takes into consideration social changes. The western society considers taking responsibility for one's health a social value, which means that an individual increasingly actively participates in recognizing symptoms, treating diseases, and maintaining their health. In accordance with this, there is growing opinion that we must be able to make independent decisions about health and conclude what is best for us. Today, patients think about the best treatment for themselves and postavljaju pitanja zdravstvenim djelatnicima u potrazi za dodatnim informacijama.

O značenju utjecaja interneta na zdravstvene odluke govori i najnoviji prijedlog o proširenju biopsihosocijalnog modela zdravlja i bolesti. Skupina autora iz SAD-a i Australije predlaže da se uz biološke, psihološke i socijalne faktore koji pridonose zdravlju i bolesti, u model uvrsti i digitalni faktor koji može imati utjecaj na sva tri prethodna faktora (7). Proširenje modela treba dovesti i do promjena u obrazovanju zdravstvenih djelatnika, kako bi se i kod njih osvijestila uloga digitalizacije u razumijevanju zdravstvenih ponašanja pacijenata te osmišljavanju zdravstvenih politika.

Dostupnost zdravstvenih informacija na internetu nosi sa sobom brojne prednosti. Pacijenti pomoću informacija na internetu postaju svjesni izbora koji im u liječenju stoje na raspolaganju, proširuju informacije dobivene od medicinskog osoblja, smanjuju broj nepotrebnih odlazaka liječniku i, naposlijetku, anonimno i brzo dolaze do željenih informacija (8). Većina korisnika, preko 90 %, izjavila je da su na internetu naučili nešto novo o svom zdravlju (9). Češća upotreba interneta za prikupljanje zdravstvenih informacija povezana je s većom vjerojatnošću promjene zdravstvenih ponašanja (10). Informacije vezane uz zdravlje prikupljene na internetu mogu utjecati na odluke koje ljudi donose: kada će tražiti dijagnozu ili terapiju od stručnjaka, kako će se nositi s trenutnom bolešću ili nekim kroničnim stanjem te kako će održavati dobrim svoje ili tuđe zdravlje (11).

Iako pretraživanje zdravstvenih informacija na internetu nudi niz prednosti, stručnjaci sve više upozoravaju na potencijalne opasnosti. Negativni aspekt lake dostupnosti informacija je njihova upitna kvaliteta, odnosno manjak zdravstvene pismenosti korisnika koja je potrebna za procjenu kvalitete pretraživanih sadržaja (8). Osobe koje pretražuju u pravilu imaju visoku razinu povjerenja u informacije prona-

ask medical workers questions in search of additional information.

The latest suggestion about the expansion of the biopsychosocial model of health and diseases reflects the significance of the Internet's influence on medical decisions. A group of authors from the USA and Australia have suggested that, along with biological, psychological, and social factors that contribute to health and disease, the model should also contain the digital factor, which may have an effect on all of the aforementioned factors (7). The expansion of the model should also lead to changes in the education of health workers in order to make them aware of the role of digitalization in the understanding of patient health behaviours and the creation of medical policies.

The availability of health information on the Internet has many benefits. By using information available on the Internet patients become aware of the choices they have at their disposal as part of their treatment, expand the information received from medical staff, reduce the number of unnecessary doctor's appointments and, finally, find desired information anonymously and quickly (8). Most users, over 90%, say that they have learned something new about their health on the Internet (9). Frequently using the Internet for gathering information related to health relates to a greater likelihood of changing health behaviour (10). Health-related information found on the Internet may affect the decisions people make: when to ask for a diagnosis or therapy from experts, how to tackle the current disease or a certain chronic condition, and how to maintain their own or someone else's health (11).

Although searching the Internet for health information offers a variety of advantages, experts increasingly warn of the potential dangers. The negative aspect of easy availability of information is its questionable quality and the users' lower medical literacy necessary for the assessment of content quality (8). People who search the Internet usually have a high level of đene na internetu (12), iako stranice sadrže mnogo netočnih i nepotpunih informacija (13) što vrijedi i za sadržaje na našem jeziku (14). U jednom istraživanju pokazalo se da samo 39 % od ukupno 500 internetskih stranica o zdravlju djece, pruža korisnicima točne i pouzdane informacije (15). U svrhu isticanja stranica koje pružaju korisne, točne i pouzdane informacije o zdravlju razvijen je HONcode certifikat kvalitete koji dodjeljuje *The Health On the Net Foundation* akreditiran od strane Ekonomskog i socijalnog vijeća Ujedinjenih naroda (16). U Hrvatskoj su ovu oznaku kvalitete za sada dobile primjerice internetske stranice Pliva zdravlje, Cybermed, CentarZdravlja itd. Nažalost, samo četvrtina korisnika prigodom pretraživanja zdravstvenih informacija na internetu obraća pažnju na kvalitetu izvora informacija (3).

Prigodom pretraživanja o zdravlju najviše se koriste opće tražilice (Google ili Yahoo) (17,18). Internetske tražilice funkcioniraju tako da rezultati koji su češće otvarani dobivaju viši rang među rezultatima. Pokazalo se da korisnici najčešće odabiru visoko rangirane stranice (19) čime održavaju njihov poredak (20). Istovremeno, korisnici imaju tendenciju pregledavanja stranica koje opisuju rijetke, intrigantne i opasne bolesti, umjesto onih koje opisuju „benigne“ i, čini se, „dosadne“ probleme (21). Primjerice, zamislimo da pojedinac želi saznati uzroke boli u prsima. Iako je puno veća vjerojatnost da je ovaj simptom indikator različitih benignih pojava poput dišnih i mišićnih problema koji nestanu samim protokom vremena, vjerojatnije je da će otvoriti poveznicu koja govori o srčanom udaru (11). Budući da broj „klikova“ određuje kasniji rang stranice, komplicirana i ozbiljna bolesti imat će viši rang nego vjerojatnije i manje zastrašujuće objašnjenje. White i Horvitz (11) su pokazali da se na internetu srčani udar pojavljuje kao rezultat pretraživanja za „bol u prsima“ u čak 37 % najviše rangiranih rezultata pretraživanja dok je u stvarnosti njihova zajednička pojavnost tek 10 %. No, čak

confidence in the information found on the Internet (12) although such pages contain a lot of inaccurate and incomplete information (13), which is also true of the content in our language (14). One study showed that only 39% of 500 pages about children's health offer accurate and reliable information (15). In order to point out the pages that offer useful, accurate, and reliable information about health, the HONcode certificate of quality was developed and is awarded by the *Health on the Net Foundation*, accredited by the United Nations Economic and Social Council (16). In Croatia, this brand of quality has been awarded to to several web pages such as: Pliva zdravlje, Cybermed, CentarZdravlja etc. Unfortunately, only a quarter of online users pay attention to the quality of information sources while searching for information about health (3).

While searching about health, general search engines (Google or Yahoo) are most commonly used (17,18). Internet search engines place results that are accessed more often higher up in the list of results. It has been shown that users usually choose high-ranking pages (19), thereby maintaining their position in the order (20). Simultaneously, users tend to view pages that describe rare, intriguing, and dangerous diseases instead of those that describe "benign" ones and seemingly "boring" problems (21). For instance, let us imagine that a user wants to learn about the causes of chest pain. Although it is more likely that this symptom is an indicator of various benign conditions such as respiratory and muscle problems that disappear over time, the user is more likely to open a link that is about cardiac arrest (11). Since the number of "clicks" determines the future ranking position of the page, a complicated and serious disease will be ranked higher than a more probable and less frightening explanation. White and Horvitz (11) have shown that cardiac arrest appears as an online search result for "chest pain" in 37% of highly ranked results, while in reality the rate of their mutual occurrence is only 10%. However, at some point in time, 75% of Internet users confuse the ranking

75 % korisnika interneta u nekom trenutku zamijeni rangiranost zdravstvenih stranica sa stvarnom mogućnošću dobivanja određene bolesti (11). Izlaganje osoba bez medicinske naobrazbe, kompleksnoj medicinskoj terminologiji i objašnjenjima medicinskih stanja može povećati vjerojatnost samodijagnoze i samotretmana (22). Samodijagnosticiranje bolesti često dovodi do razvijanja pretjerane zabrinutosti za svoje zdravstveno stanje (11), odnosno do razvoja kiberohondrije (engl. *cyberchondria*).

Pojam kiberohondrije prvi put je upotrijebljen u Ujedinjenom Kraljevstvu u novinama *Business Wire*, 1996. godine (23). U nekoliko sljedećih godina dospijeva u razne popularne medije, primjerice *Sunday Times*, BBC, *The Independent* i *Wall Street Journal* (23). Nije trebalo dugo da iz javne sfere svoje mjesto pronađe i u znanstvenoj pa se 2000. godine ovaj pojam prvi puta koristi u članku objavljenom u *The Medical Journal of Australia* (23). Danas u tražilici Google znalac može pronaći preko 1000 znanstvenih članaka u kojima se spominje engleski termin *cyberchondria*. Prema savjetu jezičnih stručnjaka u hrvatskom jeziku treba koristiti termin kiberohondrija.

Kako se radi o vrlo aktualnoj temi koja će svakako u budućnosti zaokupljati pažnju stručnjaka za mentalno zdravlje i ostalih zdravstvenih djelatnika, cilj ovog rada je razmotriti značenje pojma kiberohondrije, dati sažet pregled relevantnih istraživanja u području, pokušati integrirati nalaze u postojeće teorijske okvire te istaknuti smjernice za buduća istraživanja.

KIBEROHONDRIJA, ZDRAVSTVENA ANKSIOZNOST I HIPOHONDRIJA

Je li kiberohondrija samo moderna manifestacija hipohondrije, njezin specifičan oblik, sasvim novi psihički poremećaj ili rizični čimbenik za razvoj psihopatologije? Da bismo dali odgovore na ta pitanja, nužno je prvo precizno

order of pages about the health with a real probability of contracting a particular disease (11). Exposing people without medical education to complex medical terminology and explanations of medical conditions may lead to higher probability of self-diagnosis and self-treatment (22). Self-diagnosis often leads to the development of excess concern for one's health (11) or, in other words, the development of cyberchondria.

The term cyberchondria was first used in the United Kingdom in the newspaper *Business Wire* in 1996 (23). Over the following several years it reached various popular media such as *Sunday Times*, BBC, *The Independent* and *Wall Street Journal* (23). It did not take long for the term to move from the public to the scientific sphere, and in 2000 it was first used in an article published in *The Medical Journal of Australia* (23). Today, the search engine Google Scholar finds over 1000 journal articles that mention the English term *cyberchondria*. According to language experts, in the Croatian language the term *kiberohondrija* should be used.

Since this is a current issue that will certainly continue to occupy the attention of experts for mental health and other health workers in the future, the goal of this article is to examine the meaning of the term cyberchondria, give a summary of relevant studies in the area, attempt to integrate the findings into existing theoretical frameworks, and point out directions for future research.

CYBERCHONDRIA, HEALTH ANXIETY, AND HYPOCHONDRIA

Is cyberchondria only a modern manifestation of hypochondria, its specific form, a completely new psychological disorder, or a risk factor for the development of psychopathology? In order to provide answers to these questions, it is necessary to first define cyberchondria precisely. Although an agreement has yet to be reached about the definition of the term cyberchondria odrediti što je kiberohondrija. Iako u znanstvenim krugovima još nije postignut konsenzus oko definicije pojma kiberohondrije, Starcevic i Berle (21) navode da se u većini definicija pojavljuju dvije ključne komponente: prvo, da je riječ o pretraživanju simptoma na internetu koje je na neki način pretjerano, i drugo, da je ono popraćeno neugodnim emocionalnim stanjem. Ovi autori nude vjerojatno najprihvaćeniju i najcitiraniju definiciju u području prema kojoj je kiberohondrija „pretjerano ili ponavljano pretraživanje zdravstvenih informacija na internetu potaknuto uznemirenošću i anksioznošću radi zdravlja, a koje samo pojačava takvu uznemirenost i anksioznost" (21).

U skladu s tim, istraživanja ukazuju da su kiberohondrija i zdravstvena anksioznost povezani, no ipak različiti konstrukti (24). Starcevic i Berle (21) smatraju da je kiberohondrija ponašajna komponenta zdravstvene anksioznosti, odnosno da se pojavljuje samo kod osoba koje već jesu pretjerano zdravstveno anksiozne. *Zdravstvena anksioznost* je briga o zdravlju u odsutnosti patologije ili nerazmjernu prisutnoj patologiji (25). Može poprimiti cijeli raspon intenziteta (26), a kada je ekstremno izražena ulazi u domenu psihičkog poremećaja. U ranijoj klasifikaciji DSM-IV u tu svrhu korišten je termin *hipohondrija* (28), no zbog svoje dvosmislenosti danas se smatra nepouzdanim dijagnostičkim terminom (21). Stoga je hipohondrija u DSM-5 zamijenjena s dvije nove dijagnostičke kategorije: *Poremećaj sa somatskim simptomima* i *Anksiozni poremećaj zbog bolesti* (29). Ova druga kategorija se odnosi na ekstremni oblik zdravstvene anksioznosti.

TEORIJSKI MODELI ZDRAVLJA, ZDRAVSTVENE ANKSIOZNOSTI I KIBEROHONDRIJE

Postoji nekoliko teorijskih modela kojima je moguće razumjeti kako i zašto dolazi do kiberohondrije i kakav je njezin status u odnosu

in scientific circles, Starcevic and Berle (21) claim that most definitions contain two key components: first, that it describes searching the Internet for symptoms that is in some way excessive and, secondly, that this is followed by an unpleasant emotional state. The authors offer the most widely accepted and quoted definition in the field, according to which cyberchondria is "an excessive or repeated search for health-related information on the Internet, driven by distress or anxiety about health, which only amplifies such distress or anxiety" (21).

In line with this, research shows that cyberchondria and health anxiety are related, but different constructs (24). Starcevic and Berle (21) believe that cyberchondria is a behavioural component of health anxiety or, in other words, that is appears only in people who already feel too much health anxiety. *Health anxiety* is a concern for health in the absence of pathology or one that is disproportional to the existing pathology (25). It may assume an entire range of intensities (26), and in cases when it is extremely pronounced it enters the domain of psychological disorders. In the earlier classification of DSM-IV the term *hypochondria* was used for this purpose (28), but due to its ambiguity it is today considered an unreliable diagnostic term (21). Therefore, hypochondria was replaced with two new diagnostic categories in DSM-5: *somatic symptom disorder and illness anxiety disorder* (29). The second category refers to an extreme form of health anxiety.

THEORETIC MODELS OF HEALTH, HEALTH ANXIETY, AND CYBERCHONDRIA

There are several theoretic models that can explain how and why cyberchondria occurs and what its status is in relation to other relevant concepts on various levels. On the wider level, it is important to understand the interaction of biological, psychological, and social factors in the na druge relevantne koncepte na različitim razinama. Na široj razini važno je razumjeti međudjelovanje bioloških, psiholoških i socijalnih čimbenika u konceptu zdravlja i bolesti, a koji u suvremenom društvu mogu pogodovati razvoju kiberohondrije. Potom, na užoj razini, treba razumjeti položaj kiberohondrije u razvoju i održavanju patološke zabrinutosti za zdravlje. I na kraju, na najužoj razini, treba razumjeti pojavu i održavanje kiberohondrije kao konkretne ponašajne strategije.

Biopsihosocijalni model zdravlja i bolesti u digitalnom društvu

Biopsihosocijalni model naglašava važnost međudjelovanja bioloških, psiholoških i socijalnih faktora u razumijevanju uzroka i ishoda bolesti i zdravlja (29,30). Ovaj model je proširenje biomedicinske paradigme koja se u objašnjenju zdravlja i bolesti oslanjala isključivo na biološke faktore. No, zbog suvremenih društvenih promjena,predloženo je dodatno proširenje modela kroz uključivanje komponente *digitalnoga* koja ima specifičan utjecaj na sva tri postojeća elementa modela (7). Ovaj prošireni model može biti posebno koristan u razumijevanju kiberohondrije koja je u uskoj vezi s razvojem modernih tehnologija.

Putem modernih tehnologija podatci iz *biološke* domene postaju lako dostupni općoj populaciji (31). Tako je danas putem pametnog telefona moguće pristupiti podatcima o bolestima, rezultatima medicinskih postupaka, pa čak i podatcima o vlastitim biološkim funkcijama poput pulsa (npr. aplikacija *Instant Heart Rate*). Ovi digitalni podatci o zdravlju mogu utjecati na *psihološku* komponentu modela. Naime, informacije o zdravlju mogu smanjiti, ali i povećati anksioznost u odsutnosti somatske bolesti (32), kada govorimo o kiberohondriji.

concept of health and disease which may contribute to the development of cyberchondria in the modern world. On a narrower level, it is necessary to understand the position of cyberchondria in the development and maintenance of pathological concern for one's health. And, finally, on the narrowest level, it is also necessary to understand the appearance and maintenance of cyberchondria as a concrete behavioural strategy.

Biopsychosocial model of health and disease in the digital society

The biopsychosocial model emphasises the importance of the interaction of biological, psychological, and social factors in the understanding of the causes and outcomes of disease and health (29,30). This model is an expansion of the biomedical paradigm which, in its explanation of health and disease, relied exclusively on biological factors. However, due to changes in the modern society, there has been a suggestion of an additional expansion of the model by the inclusion of the *digital* component, which has a specific influence on all three existing models (7). This expanded model may be especially useful in the understanding of cyberchondria, which is closely related to the development of modern technologies.

Through modern technologies, information from the *biological* domain become easily available to the general population (31). Today, by using a smartphone, one can access information on diseases, the results of medical treatments, and even data on one's own biological functions such as the pulse (e.g. using the application *Instant Heart Rate*). Such digital data about health may influence the *psychological* component of the model. The information regarding health may reduce anxiety, but also increase it in the absence of a somatic disease (32) in case of cyberchondria.

Modern technologies are also changing the *social* environment of the individual. Firstly, they en-

Suvremene tehnologije u zdravlju mijenjaju i *socijalno* okruženje pojedinca. Prvo, omogućuju pristup sadržajima koje kreiraju sami bolesnici o svojim iskustvima i nošenju s bolestima. Takav sadržaj može uznemiriti osobe koje su već zabrinute za zdravlje jer su primjerice sklone precijeniti vjerojatnost da i same imaju bolest o kojoj su čule (33). Drugo, konkretan sadržaj kojem će korisnik biti izložen nakon pretrage o nekom simptomu ovisi o odabirima drugih korisnika jer se na njima temelje ranije spomenuti algoritmi rangiranja koje tražilice koriste. Oba ova procesa predstavljaju utjecaje socijalne komponente na psihološku u razvoju kiberohondrije, ali putem digitalne komponente.

No, razmotri li se socijalnu komponentu sa šireg shvaćanja, suvremene tehnologije na *kulturnoj* razini omogućuju prenošenje poruke o osobnoj odgovornosti za zdravlje promicanjem strategije samo-motrenja, poput samo-pregleda madeža, preventivnih pregleda dojki, računanja BMI indeksa ili mjerenja krvnog tlaka. Takve poruke i savjeti na internetskim portalima često su nalaze uz „lagane teme“ poput romantičnih veza, recepata i mode (34) gdje se na zdravlje gleda kao na životni stil (34), odnosno osobni odabir. Tako digitalna komponenta može pojačati potencijalno negativan utjecaj socijalne na psihološku komponentu i doprinijeti kiberohondriji kod ranjivih pojedinaca.

Općenitije, digitalnu komponentu može se shvatiti kao kontekst u kojem se međusobni utjecaji jedne komponente biopsihosocijalnog modela na drugu mogu ubrzati i pojačati te time doprinijeti pojavi nepotrebne zabrinutosti za zdravlje i patnje kod somatski zdravih osoba. Ove društvene promjene mogle bi djelovati kao globalni čimbenik rizika za razvoj zdravstvene anksioznosti, no ne objašnjavaju tijek razvoja zdravstvene anksioznosti na pojedinačnoj razini.

able access to content created by patients themselves about their own experiences and how they handle diseases. Such content can disturb people who are already concerned for their health because, for instance, they have a tendency to believe they have a disease which they heard something about (33). Secondly, the concrete content the user will be exposed to after searching about a symptom depends on the choices of other users because that is what the abovementioned search engine ranking algorithms are based on. Both of these processes represent the influences of the social component on the psychological one in the development of cyberchondria, but this occurs through the digital component.

However, if we consider the social component from a wider understanding, on the cultural level modern technologies enable the transmission of a message about personal responsibility for health by promoting the strategy of self-observation such as examining moles, preventive inspection of breasts, calculating the BMI index, or measuring blood pressure. Such messages and advice found on the Internet are often located alongside “lighter topics” such as romantic relationships, recipes, and fashion (34), and in such places health is viewed as a lifestyle (34) or a personal choice. Therefore, the digital component may exacerbate the potentially negative influence of the social component on the psychological one and contribute to cyberchondria in vulnerable individuals.

Generally, the digital component may be understood as a context in which the mutual influence of one component of the biopsychosocial model on another one may be accelerated and enhanced, therefore contributing to the appearance of an unnecessary concern for health and lead to suffering in somatically healthy people. Such social changes may act as a global risk factor on the development of health anxiety, but they do not explain the course of the development of health anxiety on the individual level.

Kognitivno-bihevioralni model zdravstvene anksioznosti

Kako je ranije navedeno, kiberohondrija se javlja kod osoba koje su već pretjerano zabrinute za zdravlje, odnosno zdravstveno su anksiozne. Prema kognitivno-bihevioralnom modelu predisponirajući čimbenik za razvoj pretjerane zdravstvene anksioznosti su disfunkcionalna vjerovanja o bolesti, zdravlju i zdravstvenim ponašanjima (35). Ova vjerovanja obično se usvajaju u ranoj životnoj dobi i to na temelju osobnih iskustava s bolešću i zdravstvenim djelatnicima, iskustava bolesti u obitelji te informacija iz medija. Primjeri takvih problematičnih uvjerenja su: „svaki simptom znak je ozbiljne bolesti“, „zdrava osoba nema nikakvih simptoma“, „ako odmah ne odem liječniku, moglo bi biti prekasno“, „moje tijelo je vrlo osjetljivo“, itd. Ova uvjerenja aktiviraju unutrašnji ili vanjski okidači. Primjer unutrašnjih okidača su bolovi (npr. glavobolja), tjelesne senzacije (npr. trnci) ili promjene (npr. pigmentacija kože). Primjer vanjskih okidača su informacije o bolesti koje osoba dobiva izvana (npr. vijest o bolesti ili smrti poznanika, informacije o bolesti na televiziji ili internetu). Kada su aktivirana, vjerovanja potiču negativne automatske misli (35), odnosno situacijski specifične kognicije. Npr., vjerovanje da je „svaki simptom znak ozbiljne bolesti“ će uz okidač glavobolje rezultirati mišlju da se radi o tumoru mozga koji se polako razvija. Prema tome, sadržaj negativnih automatskih misli uključuje *katastrofične interpretacije* benignih simptoma, dok se vjerojatnije i manje zastrašujuće interpretacije (npr. iscrpljenost) odbacuju (36). Jasno je da su takve interpretacije popraćene snažnom anksioznošću, velikom osobnom patnjom i onesposobljenošću.

Jednom kada se zdravstvena anksioznost pojavi, osoba ju pokušava kontrolirati na razne načine, no oni obično pojačavaju ili dugoročno održavaju anksioznost. Među njima ključni su različiti oblici sigurnosnih ponašanja poput *provjeravanja* tijela (npr. mjerenje temperatu-

Cognitive-behavioural model of health anxiety

As has already been mentioned, cyberchondria occurs in people who are already excessively concerned for their health, i.e. have high health anxiety. According to the cognitive-behavioural model, the predisposing factors for developing excessive health anxiety are dysfunctional beliefs about disease, health, and health behaviour (35). Such beliefs are usually acquired early in life on the basis of personal experience with diseases and health workers, the experiences with disease in the family, and the information found in media. The examples of such problematic beliefs are the following: “every symptom is a sign of a serious disease,” “a healthy person has no symptoms,” “if I do not see a doctor immediately, it may be too late,” “my body is very sensitive,” etc. These beliefs are activated by internal or external triggers. Examples of internal triggers are pain (e.g. headache), body sensations (e.g. tingling), or changes (e.g. skin pigmentation). Examples of external triggers include information about diseases a person usually gains from the outside (e.g. news about the disease or death of an acquaintance, information about diseases found on TV or the Internet). Once activated, such beliefs stimulate negative automatic thoughts (35), i.e. situationally specific cognitions. For instance, with the trigger of headache, the belief that “every symptom is a sign of disease” will result in the thought that the person has a brain tumour that is slowly developing. Therefore, the content of negative automatic thoughts includes *catastrophic interpretations* of benign symptoms, while more probable and less frightening interpretations (e.g. exhaustion) are rejected (36). It is clear that such interpretations are followed by a strong anxiety, great personal suffering, and disability.

Once health anxiety appears, the person attempts to control it in various ways, but this only intensifies or maintains anxiety in the long-run. This includes various forms of safety seeking behaviours, for example *examining* re, pipanje tijela da se utvrdi postoje li kvržice, pregled kože) i *traženja razuvjerenja* (npr. razgovor s članovima obitelji o simptomima i strahovima, odlazak na pregled, obavljanje pretraga). Sukladno modelu, traženje razuvjerenja rezultira privremenim padom anksioznosti, odnosno negativnim potkrepljenjem, ali dugoročno održava neprestano bavljenje tijelom i bolestima (36). Tako se u kliničkoj praksi vidi da izjave liječnika koje u jednom času osobu umire, vrlo brzo postanu izvor novih preokupacija. Kada se strah ponovno pojavi, osoba ima potrebu ponovno tražiti razuvjerenje u vezi nekog novog simptoma ili promjene postojećeg simptoma jer je naučila da joj to pomaže.

Pretraživanje zdravstvenih informacija na internetu može se konceptualizirati kao okidač zdravstvene anksioznosti, ali i oblik sigurnosnog ponašanja, odnosno traženja razuvjerenja. No, internet je značajno manje predvidiv izvor razuvjerenja (21) u odnosu na liječnika, partnera ili medicinsku enciklopediju, i može rezultirati različitim ishodima. Kako bi se objasnile specifičnosti pretraživanja zdravstvenih informacija na internetu u okviru zdravstvene anksioznosti, razvijen je model kiberohondrije (21).

MODEL KIBEROHONDRIJE

Prema modelu kiberohondrije koji su predložili Starcevic i Berle (21), pretraživanje zdravstvenih informacija na internetu može dovesti do dva ishoda: 1. barem privremenog pada anksioznosti kada osoba zaključi da su njezini simptomi benigni i 2. porasta anksioznosti zbog zastrašujućih informacija na koje je naišla na internetu. Istraživanja potvrđuju da pretraživanje zaista može rezultirati i padom i porastom anksioznosti (32). U prvom slučaju riječ je o klasičnom traženju razuvjerenja. Budući da u tom slučaju pretraživanje rezultira padom, a ne porastom anksioznosti, autori zaključuju da se to ne može smatrati kiberohondrijom. U dru-

one's body (e.g. taking temperature, touching the body for lumps, examining the skin) and *reassurance seeking* (e.g. talking to family members about symptoms and fears, going for a check-up, doing tests). In line with this model, reassurance seeking results in a temporary reduction of anxiety, i.e. negative support, but in the long term this maintains an incessant interest in the body and diseases (36). In clinical practice, it is apparent that statements made by a doctor may at one point in time calm the person, but soon become a source of new preoccupation. Once fear reappears, the person feels the need to seek reassurance once again regarding some new symptom or a change in the existing symptom because they have learned that this helps them.

Searching for information about health on the Internet may be conceptualized as a trigger for health anxiety, but also as a form of safety seeking behaviour, i.e. reassurance seeking. However, the Internet is a significantly less predictable source of reassurance (21) in comparison with a doctor, partner, or a medical encyclopaedia, and may result in various outcomes. In order to explain the specifics of searching for information about health on the Internet within the framework of health anxiety, the model of cyberchondria has been developed (21).

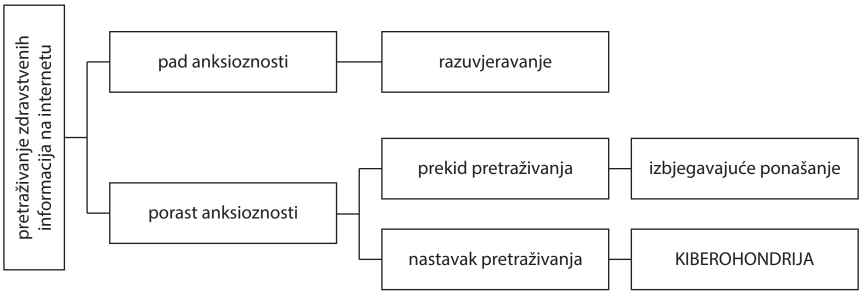
MODEL OF CYBERCHONDRIA

According to the model of cyberchondria proposed by Starcevic and Berle (21), searching for information about health on the Internet may lead to two outcomes: 1. a temporary decrease in anxiety when the person concludes that their symptoms are benign, and 2. an increase in anxiety due to the frightening information they encountered on the Internet. Research confirms that searching the Internet may actually result in both a decrease and an increase of anxiety (32). In the first case, this is a classic form of seeking reassurance. Since in this case the search results in a decrease, and gom slučaju, kada dođe do porasta anksioznosti, osoba može prestati koristiti internet u ovu svrhu. Takva reakcija mogla bi se smatrati oblikom izbjegavajućeg ponašanja u okviru kognitivno-bihevioralnog modela (37) U skladu s tim postoje indikacije da zdravstveno anksiozne osobe koje ne pretražuju zdravstvene informacije na internetu to ne čine upravo zbog straha da bi se njihova anksioznost mogla povećati (38). No, jednokratna pojava pretraživanja zdravstvenih informacija popraćena porastom anksioznosti te naknadnim izbjegavanjem pretraživanja, prema ovim autorima, također nije kiberohondrija, jer nedostaje komponenta ekscesivnosti pretraživanja (21). Tek ako osoba, unatoč barem povremenoj pojavi porasta anksioznosti zbog pretraživanja, nastavlja s ovim ponašanjem možemo govoriti o kiberohondriji. Model kiberohondrije nalazi se na slici 1.

Autori modela navode nekoliko mogućih razloga zbog kojih osoba nastavlja pretraživati informacije unastoč porastu anksioznosti. Prvo, moguće je da korisnici nastavljaju pretraživati nakon što su naišli na ozbiljnu dijagnozu jer se nadaju da će u nastavku pretraživanja pronaći

not an increase of anxiety, the authors conclude that this cannot be considered cyberchondria. In the second case, when an increase of anxiety occurs, the person may stop using the Internet for this purpose. Such a reaction may be considered avoidance behaviour in the framework of the cognitive-behavioural model (37). In line with this, there are indications that people with health anxiety who do not search the Internet for information about health do not do that precisely out of fear that their anxiety may increase (38). However, according to the authors, a single search for information about health followed by an increase in anxiety and a subsequent avoidance of searching also does not constitute cyberchondria due to the lack of the component of excessive searching (21). Only if the person, despite at least an occasional increase in anxiety due to searching, continues with this behaviour, can the model of cyberchondria be considered. Figure 1 illustrates the model of cyberchondria.

The authors of the model list several possible reasons that may lead a person to continue searching for information despite an increase in anxiety. Firstly, it is possible that users continue



SLIKA 1. Model kiberohondrije (Starcevic i Berle, 2013)

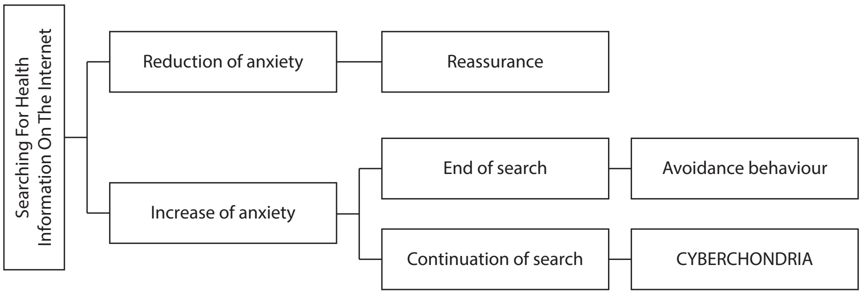


FIGURE 1. The model of cyberchondria (Starcevic and Berle, 2013)

neko vjerojatnije i manje ozbiljno objašnjenje svojih simptoma te se umiriti. Međutim, tu pretpostavku tek treba ispitati u istraživanjima. Drugo, moguće je da imaju potrebu pronaći savršeno i potpuno točno objašnjenje svojih simptoma, a za što je potrebno pregledati veliku količinu informacija. Kao potporu ovoj pretpostavci autori navode povezanost hipohondrije s perfekcionizmom i drugim aspektima opsesivno-kompulzivnog poremećaja ličnosti (39). No, za sada ne postoje objavljena istraživanja o vezi perfekcionizma i kiberohondrije. Treće, nejasne i složene informacije na internetu stvaraju neizvjesnost, a budući da ove osobe imaju teškoće u toleriranju neizvjesnosti nastavljaju pretraživati kako bi tu neizvjesnost smanjile. Za sada postoje istraživanja koja ukazuju na vezu kiberohondrije i netolerancije neizvjesnosti (40), ali čini se da postoje varijable koje su relevantnije za kiberohondriju (41). I posljednje, pretpostavlja se da ove osobe imaju teškoće u razlučivanju je li neki izvor informacija na internetu vjerodostojan ili ne zbog čega nastavljaju pretraživati. Ova pretpostavka nije dobila jasnu potvrdu jer se pokazalo da se osobe s visokom i niskom zdravstvenom anksioznošću ne razlikuju u procjeni točnosti informacija na internetu (38). Nadalje, osobe s visokom zdravstvenom anksioznošću uznemire se zbog informacija o bolesti samo ako izvor informacija potječe od vjerodostojnog izvora (zdravstvena ustanova) (33), što implicira da su takav izvor uspješno diferencirali od nevjerodostojnog.

Ovdje možemo dodati još jedno objašnjenje održavanja pretraživanja unatoč porastu anksioznosti. Barem povremeno olakšanje koje uslijedi nakon pretraživanja može dugoročno održavati ovo disfunkcionalno ponašanje jer je snažno negativno potkrepljenje s nepravilnim vremenskim rasporedom. Istraživanja su potvrdila da visoko zdravstveno anksiozne osobe vide pretraživanje kao neki oblik rješavanja problema koji dovodi do olakšanja, usprkos

searching after they encountered a serious diagnosis because they hope that the continuation of searching may lead to some more probable and less serious explanation for their symptoms, and thus calm them. However, this assumption must be tested in research. Secondly, it is possible that they feel the need to find the perfect and completely accurate explanation for their symptoms, and this requires the inspection of a large amount of information. In support for this assumption, the authors put forward the connection of cyberchondria with perfectionism and other aspects of the obsessive-compulsive disorder (39). However, no research on the link between perfectionism and cyberchondria has yet been published. Thirdly, unclear and complex information found on the Internet creates a feeling of uncertainty, and since the users have difficulty tolerating uncertainty, they continue searching in order to decrease this uncertainty. Currently, there is existing research indicating a connection between cyberchondria and uncertainty intolerance (40), but it seems there are variables that are more relevant for cyberchondria (41). And, finally, it is assumed that such people have difficulty ascertaining whether a certain Internet source is reliable or not, and this leads them to continue searching. This assumption has not been completely confirmed because it has been shown that people with high health anxiety and those with low health anxiety do not differ in their ability to assess the accuracy of information found on the Internet (38). Furthermore, people with high health anxiety are upset by information about diseases only if the information source comes from a reliable source (a health institution) (33), which implies that they have successfully distinguished such sources from those that are unreliable.

Here we may add another explanation for continued searching despite an increase in anxiety. The temporary relief that follows a search may, in the long term, maintain this dysfunctional behaviour because it strongly negatively supports it at irregular intervals. Research has tome što su svjesne da su neke informacije netočne ili dane od strane nekompetentnih osoba (42).

Unatoč tome što sve njegove pretpostavke još nisu dobile čvrstu empirijsku potvrdu, opisani model kiberohondrije vrijedan je s više aspekata. Prvo, omogućuje integraciju fenomena kiberohondrije u postojeći kognitivno-bihevioralni model zdravstvene anksioznosti koji je detaljno istražen i primjenjiv u tretmanu (43). Drugo, model jasno razlikuje kiberohondriju od drugih ponašanja i ishoda povezanih s pretraživanjem zdravstvenih informacija na internetu što olakšava njezinu preciznu i jednoznačnu operacionalizaciju u istraživanjima. Treće, model je pokušaj integracije dosadašnjih nalaza u području. I na kraju, zasigurno je potaknuo mnoga istraživanja ovog fenomena koja će, bez obzira na to pokaže li se model točnim ili ne, pomoći boljem razumijevanju kiberohondrije.

ČIMBENICI RANJIVOSTI ZA RAZVOJ KIBEROHONDRIJE

Zašto pretraživanje nekada dovodi do porasta zdravstvene anksioznosti, a nekada ne? Do sada je prepoznato nekoliko potencijalnih čimbenika ranjivosti za kiberohondriju koji mogu pomoći boljem razumijevaju sadržaja ovog konstrukta i razvoju hipoteza o tome kako do kiberohondrije dolazi.

Zdravstvena anksioznost

Zdravstvena anksioznost se pokazala kao jedan od značajnijih čimbenika ranjivosti za pojavu kiberohondrije. Do sada je utvrđeno da osobe s visokom zdravstvenom anksioznošću zaista o zdravlju pretražuju češće, većina barem jednom tjedno (33,38,44-46) te da njihove sesije pretraživanja traju dulje (38,44,45) što bi ukazivalo u prilog ekscesivnosti ovog ponašanja. Kada govorimo o posljedicama pretraživanja,

confirmed that people with high health anxiety see searching as a form of problem solving that leads to relief, although they are aware that some information is incorrect or provided by people who are not experts (42).

Although all of its assumptions have yet to receive firm empirical confirmation, the described model of cyberchondria is valuable in several ways. Firstly, it enables the integration of the phenomenon of cyberchondria into the existing cognitive-behavioural model of health anxiety, which has been researched in detail and is applicable in treatment (43). Secondly, the model clearly distinguishes cyberchondria from other behaviours and outcomes connected to searching for health-related information on the Internet, which facilitates its precise and unequivocal operationalization in research. Thirdly, the model is an attempt at integrating existing findings in the field. And finally, it has certainly prompted ample research of this phenomenon which will, whether or not the model proves to be accurate, help to improve the understanding of cyberchondria.

VULNERABILITY FACTORS FOR THE DEVELOPMENT OF CYBERCHONDRIA

Why does searching sometimes lead to an increase in health anxiety and sometimes not? Several potential vulnerability factors for cyberchondria have been recognized and may help better understand the content of this construct and the development of hypotheses regarding how cyberchondria happens.

Health anxiety

Health anxiety has been recognized as one of the more significant vulnerability factors for the onset of cyberchondria. It has been confirmed that people with high health anxiety actually search more often about health, most of them at least once a week (33,38,44-46), and that their search sessions last longer (38,44,45), which pokazalo se da visoko zdravstveno anksiozne osobe izvještavaju o većoj uznemirenosti i anksioznosti nakon pretraživanja (38,45), te da češće odlaze liječniku na temelju informacija koje pronađu na internetu (44,47).

Znači li to da je pretraživanje o zdravlju „sigurno" za osobe koje nisu zdravstveno anksiozne? Rezultati istraživanja ne daju jednoznačne odgovore. Neka istraživanja pokazuju da u ovoj populaciji pretraživanje rezultira padom anksioznosti (38,45) te da veća učestalost pretraživanja kod njih rezultira manjim brojem posjeta liječniku (47). Također, jedna studija (33) je pokazala da čitanje informacija o bolesti na internetu kod nisko zdravstveno anksioznih osoba ne dovodi do uvjerenja da su zaražene tom bolešću, kao što je bio slučaj s visoko zdravstveno anksioznima. To bi ukazivalo da pretraživanje o zdravlju na internetu za ove osobe nije štetno, već može biti korisno, kao izvor informiranja i umirenja.

Nasuprot tome, neka istraživanja pokazuju da pretraživanje može imati negativne posljedice i na osobe koje nisu zdravstveno anksiozne. Tako se pokazalo da se zabrinutost nakon pretraživanja, praćena dugotrajnijim pretraživanjem o izvoru uznemirenosti i odlaskom liječniku radi tih informacija može javiti i u općoj populaciji (11). Čini se da će, kada do eskalacije od benignog simptoma do ozbiljne bolesti jednom dođe, i visoko, i nisko zdravstveno anksiozne osobe doživjeti porast anksioznosti (48). Međutim, iz nekog razloga pretrage nisko zdravstveno anksioznih osoba rjeđe dovode do zastrašujućih dijagnoza (11). Dva longitudinalna istraživanja također ukazuju u prilog pretpostavci da pretraživanje može biti opasno i za osobe koje nisu zdravstveno anksiozne. Ranije spomenuto longitudinalno istraživanje (46) pokazalo je da porast pretraživanja o zdravlju predviđa porast u anksioznosti dva mjeseca kasnije upravo kod nisko zdravstveno anksioznih osoba i obratno, da porast anksioznosti u ovoj populaciji predviđa porast u pretraživanju.

goes in favour of the excessiveness of this behaviour. When talking about the consequences of searching, it has been shown that people with high health anxiety report greater concern and anxiety after searching (38,45), and that they visit their doctor more frequently on the basis of information found on the Internet (44,47).

Does this mean that searching for information about health is "safe" for people who do not have health anxiety? Research results do not provide unequivocal answers. Some studies have shown that searching results in a decrease of anxiety in this population (38,45) and that more frequent searching results in fewer visits to the doctor (47). Also, one study (33) has shown that people who have low health anxiety do not develop the belief that they have a certain disease when they read information about it on the Internet, unlike in the case of those who have high health anxiety. This indicates that searching the Internet about health information is not harmful for such people and may actually be beneficial as a source of information and peace of mind.

On the other hand, some studies show that searching may have negative consequences on people who do not have health anxiety. It has been shown that concern after searching, followed by a longer search on the source of concern and a visit to the doctor due to such information, may also occur in the general public (11). It seems that, once a benign symptom escalates into a serious disease, both people with low and high health anxiety experience a serious increase in anxiety (48). However, for some reason, searching done by people with low health anxiety rarely leads to frightening diagnoses (11). Two longitudinal studies also go in favour of the assumption that searching may also be dangerous for people with no health anxiety. The abovementioned longitudinal study (46) has shown that increased searching about health is a predictor of an increase in anxiety two months later in people with low health anxiety and vice versa, that an increase in anxiety in this population is a predictor

Sukladno tome, drugo je longitudinalno istraživanje na općem uzorku pokazalo da porast pretraživanja rezultira porastom depresivnosti 6 do 8 mjeseci kasnije (49).

Netolerancija neizvjesnosti

Jedan od glavnih ciljeva pretraživanja o zdravlju na internetu je smanjenje neizvjesnosti (50). Važna prednost za korisnike je činjenica da internet nudi mogućnost da se neki nejasan simptom istraži čim se pojavi (42), što znači da osoba ne mora tolerirati neizvjesnost neko vrijeme kao što je slučaj s liječničkim pregledom. No, s obzirom da će korisnik na internetu biti izložen velikoj količini informacija, koje mogu biti kontradiktorne (51), pretraživanje može rezultirati i povećanom neizvjesnosti. U skladu s time, pokazalo se da je povezanost učestalosti pretraživanja i zdravstvene anksioznosti snažnija za više razine *netolerancije neizvjesnosti* (52). Autor zaključuje da bi teškoće u toleriranju neizvjesnosti mogle biti rizični faktor za kiberohondriju. Kao dodatni argument navodi se da su osobe s izraženijom netolerancijom neizvjesnosti sklone dvosmislene informacije o zdravlju procijeniti na katastrofičan način te precijeniti negativne posljedice (52,53). Kada pronađu takve informacije na internetu, ove bi se osobe mogle snažno uznemiriti, a potom zbog potrebe da smanje neizvjesnost nastaviti pretraživati (21) što dovodi do ekscesivnosti pretraživanja.

Naknadno se pokazalo da je samo jedan aspekt konstrukta netolerancije neizvjesnosti relevantan za kiberohondriju – inhibitorna dimenzija (npr. „Kada nisam siguran, ne mogu funkcionirati“), za razliku od prospektivne (npr. „Uvijek želim znati što mi budućnost nosi“) (41). Slično je utvrđeno i za zdravstvenu anksioznost (40). Čini se da je nemogućnost osobe da nastavi funkcionirati kada se neizvjesnost pojavi ključan aspekt briga oko zdravlja, osobito za kiberohondriju jer bi mogao potaknuti dugotrajno pretraživanje s ciljem sma-

of increased searching. In line with this, the second longitudinal study done on a general sample has shown that increased searching results in an increase of depression 6 to 8 months later (49).

Intolerance of uncertainty

One of the main goals of searching the Internet about health is reduction of uncertainty (50). The fact that the Internet offers the ability to research an insignificant symptom immediately after its appearance constitutes an important advantage for the users (42), which means that a person does not have to tolerate uncertainty for some time, unlike in the case of a visit to the doctor. However, since users are exposed to a large amount of information on the Internet, which may be contradictory (51), searching may also result in increased uncertainty. In line with this, it has been shown that the connection between the frequency of searching and health anxiety is stronger for higher levels of *intolerance of uncertainty* (52). The author concludes that difficulties in tolerating uncertainty may be risk factors for cyberchondria. As an additional argument, the author claims that people with more pronounced intolerance of uncertainty have a tendency to assess ambiguous information about health in a catastrophic way, thus overevaluating negative consequences (52,53). Once they find such information on the Internet, these individuals may be seriously upset and may then continue searching in order to reduce uncertainty (21), which leads to excessive searching.

Subsequently, it has been shown that only one aspect of the construct of intolerance of uncertainty is relevant for cyberchondria – inhibitory dimension (e.g. “When I am not sure, I cannot function”), unlike the prospective one (e.g. “I always want to know what the future will bring for me”) (41). A similar conclusion has been reached concerning health anxiety (40). It seems that a person’s inability to continue functioning when faced with uncertainty is a key aspect in caring about their health, especially for cyberchondria njenja neizvjesnosti što ometa druge aspekte funkcioniranja.

Anksiozna osjetljivost

Sklonost katastrofičnim interpretacijama simptoma anksioznosti zbog vjerovanja da će one rezultirati štetnim tjelesnim, psihičkim i socijalnim posljedicama (54) ključna je karakteristika konstrukta *anksiozne osjetljivosti*. Pri tome osoba može biti zabrinuta zbog somatskih posljedica (npr. srčani udar), psiholoških posljedica (gubitak razuma) ili socijalnih posljedica (sramoćenje).

Veza anksiozne osjetljivosti i hipohondrije utvrđena je ranije (55), a relevantnom se pokazala samo dimenzija straha od somatskih posljedica (40). No, za kiberohondriju je utvrđen drugačiji uzorak povezanosti: različiti aspekti kiberohondrije povezani su sa sve tri komponente anksiozne osjetljivosti (41), što može pomoći razjasniti razliku između zdravstvene anksioznosti i kiberohondrije. Osobito je zanimljiva veza kiberohondrije sa socijalnim aspektom anksiozne osjetljivosti. Naime, logično je da su među zdravstveno anksioznim osobama, pretraživanju na internetu sklone upravo one osobe koje vjeruju da bi pokazivanje zabrinutosti za zdravlje pred drugima moglo imati negativne socijalne posljedice (41). Tako su, primjerice, ove osobe u intervjuima izjavile da pretražuju o svojim zdravstvenim brigama na internetu jer imaju negativna očekivanja i iskustva sa zdravstvenim djelatnicima (42). Stoga možda preferiraju internet kao izvor razuvjeravanja umjesto razgovora s liječnikom, obitelji ili prijateljima.

Metakognicije

Vjerovanja koja pojedinac ima o svojim brigama oko zdravlja mogu utjecati na način na koji će se s njima nositi. *Metakognicije*, odnosno kognicije o kognicijama, pokazale su se važnima kod različitih psihičkih poremećaja (56), uključujući

because this may instigate long-term searching with the goal of reducing uncertainty, which disrupts other aspects of functioning.

Anxiety sensitivity

The tendency for catastrophic interpretations of anxiety symptoms due to the belief that they will result in harmful physical, psychological, and social consequences (54) is the key characteristic of the construct of *anxiety sensitivity*. The person may be concerned about somatic consequences (e.g. cardiac arrest), psychological consequences (loss of sanity), or social consequences (embarrassment).

The connection between anxiety sensitivity and hypochondria has already been established (55), and only the aspect of fear from somatic consequences has been shown to be relevant (40). However, a different pattern of connection has been established for cyberchondria: different aspects of cyberchondria connected with all three components of anxiety sensitivity (41), which can help clarify the difference between health anxiety and cyberchondria. Of special interest is the connection between cyberchondria and the social aspect of anxiety sensitivity. It is logical that among individuals who have health anxiety, those who have a tendency to search the Internet also believe that showing concern about their health in front of others may have negative social consequences (41). For example, in interviews such people have said that they search the Internet about their health concerns because they have negative expectations and experiences with health workers (42). Therefore, they may prefer the Internet as a source of reassurance instead of a conversation with a doctor, family member, or friend.

Metacognitions

An individual's beliefs about their concern about health may affect the way they handle them. *Metacognitions*, or cognitions about cognitions, i zdravstvenu anksioznost (57). Prema metakognitivnom modelu (58) pozitivna vjerovanja o brigama, u ovom kontekstu da briga može zaštiti osobu od razvoja bolesti i smrti, potpomaže održavanju ove disfunkcionalne i iscrpljujuće kognitivne aktivnosti. S druge strane, negativna vjerovanja o brigama, npr. da ih nije moguće kontrolirati i da će brige u konačnici naštetiti zdravlju, pojačavaju osjećaj distresa. Pokazalo se da je kiberohondrija povezana s metakognitivnim vjerovanjima, čak i kada se zdravstvena anksioznost kontrolira (59). Posebno važnima pokazala su se vjerovanja o nekontrolabilnosti vlastitih briga o zdravlju. Autori pretpostavljaju da kada se pojavi zabrinutost za zdravlje, ove osobe pretražuju o zdravlju na internetu da bi smanjile svoju anksioznost. Međutim, ona se zbog informacija na internetu može dodatno pojačati što će učvrstiti vjerovanje da brige o zdravlju nije moguće kontrolirati.

MJERENJE KIBEROHONDRIJE

Navedene informacije upućuju na veliku važnost proučavanja kiberohondrije. Tu važnost prepoznali su McElroy i Shelvin (60) i razvili prvu multidimenzionalnu ljestvicu pod nazivom Ljestvica izraženosti kiberohondrije (*Cyberhondria Severity Scale*, CSS) sa 33 čestice. Autori pretpostavljaju postojanje petofaktorske strukture kiberohondrije (kompulzivnost, rastresenost, ekscesivnost, traženje drugog mišljenja i nepovjerenje u medicinsko osoblje). Upravo je zadnji faktor izazvao najviše neslaganja oko ljestvice. Iako su McElroy i Shelvin u svojem istraživanju dobili petfaktorsku strukturu, kasnije provjere nisu uspjele doći do istih rezultata. Fergus (24), Norr i sur. (61) te Barke i sur. (62) smatraju da peti faktor nije dio konstrukta kiberohondrije. Faktorska struktura hrvatskog prijevoda nailazi na identične probleme (63).

U nas je razvijena Kratka ljestvica kiberohondrije (*The Short Cyberhondria Scale*, SCS) (64).

have been shown to be important in various psychological disorders (56), including health anxiety (57). According to the metacognitive model (58), positive beliefs about worry (in this context, the belief that worrying may protect a person from developing a disease and dying) help maintain this dysfunctional and exhausting cognitive activity. On the other hand, negative beliefs about worry, e.g. that they are impossible to control and that they will ultimately harm one's health, increase the feeling of distress. It has been shown that cyberchondria is connected with metacognitive beliefs, even when health anxiety is controlled (59). Of special importance are beliefs about the uncontrollability of health related thoughts. The authors assume that, once worry about one's health appears, such people search the Internet about health in order to reduce their anxiety. However, due to information on the Internet, their anxiety may actually increase, which strengthens the belief about uncontrollability of illness related thoughts.

MEASURING CYBERCHONDRIA

The abovementioned information indicates the great importance of studying cyberchondria. This importance has been recognized by McElroy and Shelvin (60), who have developed the first multidimensional scale called *Cyberchondria Severity Scale* (CSS), which has 33 items. The authors report five-factor structure of cyberchondria (compulsivity, distractedness, excessiveness, asking for a second opinion, and lack of trust in medical workers). The last factor has provoked the largest amount of disagreement about the scale. Although McElroy and Shelvin reached a five-factor structure in their research, subsequent examinations have failed to replicate identical results. Fergus (24), Norr et al. (61), and Barke et al. (62) all believe that the fifth factor is not part of the construct of cyberchondria. The factor structure of the Croatian translation encounters identical problems (63).

Radi se o istraživačkom instrumentu koji je ekstremno kratak (4 čestice), valjana je, standardizirana mjera kiberohondrije, jednostavan je za primjenu, i međukulturnu upotrebu jer se čestice odnose na sržne elemente kiberohondrije. Međutim, nužna su daljnja istraživanja ove ljestvice kako bi se potvrdila njezina univerzalnost u međukulturnim uvjetima. Kratka ljestvica kiberohondrije prikazana je u tablici 1.

PREVENCIJA I TRETMAN KIBEROHONDRIJE

Do sada je u literaturi predloženo nekoliko strategija za prevenciju pojave kiberohondrije. Neke od njih usmjeravaju se na internetske tražilice, algoritme u podlozi tražilica i zdravstvene sadržaje na internetu. Tako se predlaže razvoj *softweare*-a koji može detektirati pokušaje samo-dijagnosticiranja, osigu-

In Croatia, *The Short Cyberchondria Scale* (SCS) has been developed (64). This is a research instrument that is extremely short (4 units) and is a valid, standardized measurement tool for cyberchondria, easy for implementation and intercultural use because the items refer to core elements of cyberchondria. However, further research of this scale is required in order to confirm its universality in intercultural conditions. *The Short Cyberchondria Scale* is shown in Table 1.

PREVENTION AND TREATMENT OF CYBERCHONDRIA

Several strategies for the prevention of the onset of cyberchondria have been proposed in the literature. Some of them focus on Internet search engines, algorithms that underlie the search engines, and health content on the Internet. There has been the suggestion of developing software that can detect attempts at

TABLICA 1. Kratka ljestvica kiberohondrije (*Short Ccyberhondria Scale*, SCS, Jokić-Begić i sur., 2017)

Molimo Vas da za svaku tvrdnju označite onaj odgovor za koji smatrate da se najviše odnosi na Vas:					
Uopće se ne slažem	**Uglavnom se ne slažem**	**Niti se slažem niti ne slažem**	**Uglavnom se slažem**	**U potpunosti se slažem**	
1	**2**	**3**	**4**	**5**	
1. Nakon pretrage zdravstvenih informacija zbunjena sam informacijama koje sam pronašla.	1	2	3	4	5
2. Nakon pretrage zdravstvenih informacija osjećam se preplašeno.	1	2	3	4	5
3. Nakon pretrage zdravstvenih informacija osjećam se frustrirano.	1	2	3	4	5
4. Kada jednom počnem tražiti zdravstvene informacije, teško mi je prestati.	1	2	3	4	5

Bodovanje: Rezultat se računa kao zbroj bodova za sve četiri tvrdnje pri čemu pojedini odgovori nose sljedeći broj bodova: uopće se ne slažem = 1, uglavnom se ne slažem = 2, niti se slažem, niti se ne slažem = 3, uglavnom se slažem = 4 i u potpunosti se slažem = 5.

TABLE 1. *Short Cyberchondria Scale*, SCS, Jokić-Begić et al., 2017

For each claim, please select the response that is most relevant for you.					
Completely disagree	**Mostly disagree**	**Neither agree nor disagree**	**Mostly agree**	**Completely agree**	
1	**2**	**3**	**4**	**5**	
1. After searching for health information, I am confused by information I have found.	1	2	3	4	5
2. After searching for health information, I feel frightened.	1	2	3	4	5
3. After searching for health information, I feel frustrated.	1	2	3	4	5
4. Once I start searching for health information, I find it difficult to stop.	1	2	3	4	5

Scoring: The result is calculated as the sum of points for all four claims, whereby the individual responses have the following number of points: completely disagree = 1, mostly disagree = 2, neither agree nor disagree = 3, mostly agree = 4, and completely agree = 5.

ravanje pouzdanih i točnih rezultata tražilica kao odgovor na nekoliko uobičajenih pretraga, označavanje potencijalno opasnih stranica (11) te inkorporiranje činjenica o prevalenciji i vjerojatnosti pojedinih dijagnoza u tražilice (21). Ponuda točnih i razumljivih zdravstvenih informacija (65) te navođenje vjerojatnijih uzorka simptoma u tekstovima koji opisuju rijetke i ozbiljne bolesti (11), također može smanjiti vjerojatnost eskalacije. Ove strategije podrazumijevaju blisku suradnju stručnjaka iz zdravstvene i informatičke domene.

Neke strategije za prevenciju kiberohondrije usmjeravaju se izravno na korisnike interneta pa se primjerice predlaže njihova edukacija o zdravlju koja može olakšati procjenu točnosti informacija na internetu što bi smanjilo vjerojatnost eskalacije (45) ili edukacija o tome kako pronaći željenu informaciju na internetu bez osjećaja preplavljenosti njihovom kvantitetom (65). Trebalo bi provjeriti jesu li takve edukacije zaista djelotvorne u prevenciji kiberohondrije kada dođe do izloženosti zastrašujućim informacijama o zdravlju.

No, kako pomoći korisnicima kod kojih je do kiberohondrije već došlo, osobito onih koji imaju visoku zdravstvenu anksioznost? Ako je kiberohondrija dio psihičkog poremećaja – patološke zabrinutosti za zdravlje – ima ju smisla tretirati u okviru tog poremećaja. Uglavnom se predlažu tehnike iz kognitivno-bihevioralne terapije (KBT) za koje se pokazalo da su učinkovite u tretmanu zdravstvene anksioznosti (43). Kiberohondriju je moguće konceptualizirati kao sigurnosno ponašanje, a potom putem bihevioralnih eksperimenata pomoći pacijentu da prepozna negativne posljedice ove strategije i ubuduće ograniči pretraživanje (38). U tome može pomoći *software* koji blokira pristup onim sadržajima koji mogu potaknuti anksioznost (45). Kao i u klasičnom tretmanu zdravstvene anksioznosti može se preporučiti postupno izlaganje zastrašujućim sadržajima

self-diagnosis, ensuring reliable and accurate search results as an answer to several common topics, marking potentially dangerous pages (11), and incorporating facts on the prevalence and probability of certain diagnoses into the search engines (21). Offering accurate and understandable health information (65) and listing the most probable causes of symptoms in texts describing rare and serious diseases (11) may also reduce the probability of escalation. These strategies require the close cooperation of experts from the fields of medicine and information technology.

Certain strategies for the prevention of cyberchondria focus on Internet users directly so, for example, there is the suggestion of educating users about health, which may aid them in assessing the accuracy of information on the Internet and may reduce the probability of escalation (45), or the suggestion of educating them on how to find desired information on the Internet without feeling overwhelmed by their quantity (65). Future research is needed to test whether such forms of education are truly effective in the prevention of cyberchondria in the case of exposure to frightening information about health.

However, how do we help users who already have cyberchondria, especially those with high health anxiety? If cyberchondria is part of a psychological disorder – a pathologic concern about health – it makes sense to treat it within the framework of that disorder. Most of the suggested techniques are from the cognitive-behavioural therapy (CBT), which have been shown to be effective in the treatment of health anxiety (43). Cyberchondria can be conceptualized as a safety seeking behaviour, and then patients can be helped to recognize the negative consequences of this strategy through behavioural experiments and, in the future, limit their search (38). This can be aided by software that blocks access to content that may trigger anxiety (45). As in classic treatment for health anxiety, a gradual exposure to frightening content on the Interna internetu s ciljem habituacije (21). S obzirom da postoje naznake da su netolerancija neizvjesnosti, anksiozna osjetljivost i metakognicije o zdravlju povezane s kiberohondrijom, može biti korisno posebno se na njih usmjeriti u okviru psihoterapijskog tretmana (41,52,59). U tu svrhu mogu se koristiti različite tehnike poput izlaganja neizvjesnosti, mijenjanja vjerovanja o neizvjesnosti i zdravstvenim brigama, *mindfulness*, itd. No, za sada još ne postoje istraživanja o učinkovitosti navedenih tehnika u tretiranju kiberohondrije.

ZAKLJUČAK

Dostupnost interneta širokom krugu ljudi učinila je pretraživanje informacija jednostavnijim i bržim nego ikad prije. Sve više ljudi okreće se internetu u potrazi za informacijama, pa tako i informacijama o zdravlju. Iako su prednosti interneta nesumnjive, sve su jasnije i negativne posljedice takvog načina informiranja. Jedna od negativnih posljedica je kiberohondrija, odnosno intenziviranje anksioznosti koje prati opetovano pretraživanje zdravstvenih informacija na internetu. Ovaj se fenomen istražuje zadnjih 15-tak godina i do sada nije postignut konsenzus radi li se o zasebnom psihopatološkom entitetu ili se radi o ponašajnoj manifestaciji zdravstvene anksioznosti. Kiberohondrija je osobito karakteristična za osobe s visokom zdravstvenom anksioznošću, što ide u prilog da se radi o istom fenomenu. No, metodološki dobro osmišljena longitudinalna istraživanja pokazuju da bi i kod zdravih osoba pretraživanje moglo vremenom potaknuti razvoj pretjerane zabrinutosti za zdravlje. Ovi nalazi daju podršku kognitivno-bihevioralnom modelu prema kojemu pretraživanje može biti i okidač zdravstvene anksioznosti i njezin održavajući faktor. Nužna su daljnja istraživanja, prije svega na kliničkim skupinama koja će pokazati radi li se o specifičnim obrascima ponašanja i doživljavanja koja su povezana upravo

net with the aim of habituation may be recommended (21). Since there are indications that intolerance of uncertainty, anxiety sensitivity, and metacognitions about health are connected with cyberchondria, it may be useful to focus on them specifically within psychotherapeutic treatment (51,52,59). For this purpose, various techniques may be used, such as exposure to uncertainty, changing beliefs about uncertainty and health concerns, mindfulness, etc. However, there are no existing studies on the effectiveness of the aforementioned techniques in the treatment of cyberchondria.

CONCLUSION

The availability of the Internet to a wide circle of people has made searching for information simpler and faster than ever before. Increasing numbers of people reach for the Internet in search of information, including information about health. Although the advantages of the Internet are beyond doubt, the negative consequences of this form of obtaining information are becoming more obvious. One such negative consequence is cyberchondria, or the intensification of anxiety followed by repeated searching for health information on the Internet. This phenomenon has been studied for the past fifteen years, and no consensus has yet been reached regarding whether it is a separate psychopathological entity or a behavioural manifestation of health anxiety. Cyberchondria is particularly characteristic for people with a high level of health anxiety, which goes in favour of the claim that this is actually the same phenomenon. However, methodologically well-conceived longitudinal studies have shown that even in healthy people searching may over time trigger the development of excessive concern about health. Such findings support the cognitive-behavioural model, according to which searching may be also a trigger for health anxiety and its maintenance factor. Further research is required, primarily on clinical groups, which s pretraživanjem interneta ili se radi samo o ponašajnoj manifestaciji pretjerane zabrinutosti za zdravlje. Iako je sada prepoznato nekoliko karakteristika korisnika i internetskih tražilica koje bi mogle olakšati pojavu porasta anksioznosti zbog pretraživanja, točni mehanizmi putem kojih do toga dolazi još nisu razjašnjeni.

Sasvim je izvjesno da će internet postajati sve značajniji izvor podataka o zdravlju i bolesti, te je stoga važno razumjeti čimbenike koji dovode do pojačavanja zdravstvene anksioznosti i kiberohondrije kako bi se mogle osmisliti prevencijske i tretmanske aktivnosti. Značajni pomaci mogu se učiniti u edukaciji. Prije svega, sadašnje i buduće zdravstvene djelatnike treba educirati o fenomenu pretraživanja i njegovim posljedicama. Svakako treba povećavati zdravstvenu pismenost javnosti uključivanjem informacija o zdravlju u kurikule nastave već od osnovne škole. Iako može zvučati utopijski, trebalo bi educirati IT stručnjake koji kreiraju algoritme na tražilicama o posljedicama koje rangiranja stranica ostavlja na mentalno zdravlje. Kod osoba koje već imaju intenzivnu kiberohondriju preporuča se primjenjivati KBT tretmane koji prate protokole za zdravstvenu anksioznost uz prilagodbe usmjerene smanjivanju pretraživanja, odnosno informiranju na kvalitetnim stranicama.

will show whether there are specific patterns of behaviour and experience that are connected to searching the Internet or whether this is simply a behavioural manifestation of excessive concern about health. Although several characteristics of users and Internet search engines which may simplify the increase of anxiety due to searching have been recognized, the exact mechanisms which lead to this have yet to be explained.

It is clear that the Internet will continue to become a more significant source of information about health and disease, which is why it is important to understand the factors that lead to increased health anxiety and cyberchondria and create activities for its prevention and treatment. Significant improvements can be made in education. Primarily, current and future health workers should be educated on the phenomenon of searching the Internet and its consequences. The health literacy of the public should definitely be increased by including information about health in school curricula from the level of primary school. Although this may sound utopian, IT experts who create algorithms for search engines should be educated about the consequences that ranking pages has on mental health. For people who already have intense cyberchondria, it is recommended to apply CBT treatments which follow the protocols for health anxiety, with adjustments focused on reducing searching and finding information on quality pages.

LITERATURA / *REFERENCES*

1. TNS Political and Social. Flash Eurobarometer 404: European citizens' digital health literacy. Directorate-General Communication Networks, Content and Technology, European Commission, Brussels, 2014.
2. Prestin A, Vieux SN, Chou WY. Is online health activity alive and well or flatlining? Findings from 10 years of the Health Information National Trends Survey. J Health Communication 2015; 20(7): 790-8.
3. Fox S, Jones S. The social life of health information. Pew Research Center, 2009.
4. Hallyburton A, Evarts LA. Gender and online health information seeking: A five survey meta-analysis. J Consum Health Internet 2014; 18(2): 128-42.
5. Nikoloudakis IA, Vandelanotte C, Rebar AL, Schoeppe S, Alley S, Duncan MJ *et al*. Examining the Correlates of Online Health Information–Seeking Behavior Among Men Compared With Women. Am J Men's Health 2018; 12(5): 1358-67.
6. Lee YJ, Boden-Albala B, Larson E, Wilcox A, Bakken S. Online health information seeking behaviors of Hispanics in New York City: a community-based cross-sectional study. J Med Internet Res 2014; 16(7): e176.
7. Ahmadvand A, Gatchel R, Brownstein J, Nissen L. The Biopsychosocial-Digital Approach to Health and Disease: Call for a Paradigm Expansion. J Med Internet Res 2018; 20(5): e189.

8. McDaid D, Park A-L. Online health: untangling the web. Preuzeto 12 siječnja 2019. www.bupa.com.au/staticfiles/Bupa/HealthAndWellness/MediaFiles/PDF/LSE_Report_Online_Health.pdf
9. Fox S, Rainie L. Vital Decisions: How Internet Users Decide what Information to Trust when They Or Their Loved Ones are Sick: Plus a Guide from the Medical Library Association about Smart Health-search Strategies and Good Web Sites. Pew Internet & American Life Project, 2002.
10. Ayers SL, Kronenfeld JJ. Chronic illness and health-seeking information on the Internet Health 2007; 11(3): 327-47.
11. White RW, Horvitz E. Cyberchondria: studies of the escalation of medical concerns in web search. ACM Transactions on Information Systems (TOIS). 2009; 27(4): 23.
12. Akerkar SM, Kanitkar M, Bichile LS. Use of the Internet as a resource of health information by patients: a clinic-based study in the Indian population. J Postgraduate Med 2005; 51(2): 116.
13. Eysenbach G, Powell J, Kuss O, Sa ER. Empirical studies assessing the quality of health information for consumers on the world wide web: a systematic review. JAMA 2002; 287(20): 2691-2700.
14. Jokić-Begić N, Bagarić B, Jurman J. www. depresija/anksioznost. hr...–Information on Depression and Anxiety on Internet Pages. Soc psihijat 2015; 43: 209-18.
15. Scullard P, Peacock C, Davies P. Googling children’s health: reliability of medical advice on the internet. Arch Dis Child 2010; 95(8): 580-2.
16. Health On The Net Foundation. Preuzeto 12. siječnja 2018. https://www.hon.ch/HONcode/
17. Rice RE. Influences, usage, and outcomes of Internet health information searching: multivariate results from the Pew surveys. Int J Med Informatics 2006; 75(1): 8-28.
18. Buhi ER, Daley EM, Fuhrmann HJ, Smith SA. An observational study of how young people search for online sexual health information. J Am Coll Health 2009; 58(2): 101-11.
19. Van Deursen AJ, Van Dijk JA. Using the Internet: Skill related problems in users’ online behavior. Interacting with Computers 2009; 21(5-6): 393-402.
20. Joachims T, Granka L, Pan B, Hembrooke H, Gay G. Accurately interpreting clickthrough data as implicit feedback. In: SIGIR 2005 – Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval https://doi.org/10.1145/1076034.1076063.
21. Starcevic V, Berle D. Cyberchondria: towards a better understanding of excessive health-related Internet use. Exp Rev Neurother 2013; 13(2): 205-13.
22. Semigran HL, Linder JA, Gidengil C, Mehrotra A. Evaluation of symptom checkers for self-diagnosis and triage: audit study. BMJ 2015; 351:3480
23. Loos A. Cyberchondria: too much information for the health anxious patient?. J Consum Health Internet. 2013; 17(4): 439-45.
24. Fergus TA. The Cyberchondria Severity Scale (CSS): an examination of structure and relations with health anxiety in a community sample. J Anxiety Disord 2014; 28(6): 504-10.
25. Lucock MP, Morley S. The health anxiety questionnaire. Br J Health Psychol 1996; 1(2): 137-50.
26. Asmundson GJG, Taylor S, Cox BJ. Health anxiety: Clinical and Research Perspectives on Hypochondriasis and Related Conditions. Cichester, New York: John Wiley & Sons, 2001.
27. Diagnostic and Statistical Manual of Mental Disorders, 4th ed. Washington, DC: American Psychiatric Association, 1994.
28. Diagnostic AP. Statistical Manual of Mental Disorders: DSM-5 (ed.) Washington, DC: American Psychiatric Association, 2013.
29. Engel GL. The need for a new medical model: a challenge for biomedicine. Science 1977; 196(4286): 129-36.
30. George E, Engel L. The clinical application of the biopsychosocial model. Am J Psychiatry 1980; 137: 535-44.
31. Lucivero F, Prainsack B. The lifestylisation of healthcare?‘Consumer genomics’ and mobile health as technologies for healthy lifestyle. Applied Translational Genomics 2015; 4: 44-9.
32. White RW, Horvitz E. Experiences with web search on medical concerns and self diagnosis. In: AMIA annual symposium proceedings 2009; 2009: 696-700. American Medical Informatics Association.
33. Baumgartner SE, Hartmann T. The role of health anxiety in online health information search. Cyberpsychology, behavior, and social networking 2011; 14(10): 613-18.
34. Lewis T. Seeking health information on the internet: lifestyle choice or bad attack of cyberchondria?. Media, Culture & Society 2006; 28(4): 521-39.
35. Warwick HM, Salkovskis PM. Hypochondriasis. Behav Res Ther 1990; 28(2): 105-17.
36. Warwick HM. Cognitive therapy in the treatment of hypochondriasis. Adv Psychiatr Treat 1998; 4(5): 285-91.
37. Abramowitz JS, Schwartz SA, Whiteside SP. A contemporary conceptual model of hypochondriasis. Mayo Clin Proc 2002; 77(12): 1323-30.
38. Muse K, McManus F, Leung C, Meghreblian B, Williams JM. Cyberchondriasis: fact or fiction? A preliminary examination of the relationship between health anxiety and searching for health information on the Internet. J Anxiety Disord 2012; 26(1): 189-96.
39. Starcević V. Relationship between hypochondriasis and obsessive-compulsive personality disorder: close relatives separated by nosological schemes? Am J Psychother 1990; 44(3): 340-7.
40. Fergus TA, Bardeen JR. Anxiety sensitivity and intolerance of uncertainty: Evidence of incremental specificity in relation to health anxiety. Personality and Individual Differences 2013; 55(6): 640-4.

41. Fergus TA. Anxiety sensitivity and intolerance of uncertainty as potential risk factors for cyberchondria: A replication and extension examining dimensions of each construct. J Affect Disord 2015; 184: 305-9.
42. McManus F, Leung C, Muse K, Williams JM. Understanding 'cyberchondria': an interpretive phenomenological analysis of the purpose, methods and impact of seeking health information online for those with health anxiety. CBT 2014; 7 (e21): 1-13.
43. Taylor S, Asmundson GJG. Treating health anxiety: A cognitive-behavioral approach. New York: The Guilford Press, 2004.
44. Singh K, Brown RJ. Health-related Internet habits and health anxiety in university students. Anxiety Stress Coping 2014; 27(5): 542-54.
45. Doherty-Torstrick ER, Walton KE, Fallon BA. Cyberchondria: parsing health anxiety from online behavior. Psychosomatics 2016; 57(4): 390-00.
46. te Poel F, Baumgartner SE, Hartmann T, Tanis M. The curious case of cyberchondria: A longitudinal study on the reciprocal relationship between health anxiety and online health information seeking. J Anxiety Disord 2016; 43: 32-40.
47. Eastin MS, Guinsler NM. Worried and wired: effects of health anxiety on information-seeking and health care utilization behaviors. CyberPsychology Behavior 2006; 9(4): 494-8.
48. Singh K, Brown RJ. From headache to tumour: An examination of health anxiety, health-related Internet use and 'query escalation'. J Health Psychol 2016; 21(9): 2008-20.
49. Bessière K, Pressman S, Kiesler S, Kraut R. Effects of internet use on health and depression: a longitudinal study. J Med Internet Res 2010; 12(1): e6.
50. Caiata-Zufferey M, Abraham A, Sommerhalder K, Schulz PJ. Online health information seeking in the context of the medical consultation in Switzerland. Qual Health Resh 2010; 20(8): 1050-61.
51. Berland GK, Elliott MN, Morales LS, Algazy JI, Kravitz RL, Broder MS *et al*. Health information on the Internet: accessibility, quality, and readability in English and Spanish. JAMA 2001; 285(20): 2612-21.
52. Fergus TA. Cyberchondria and intolerance of uncertainty: examining when individuals experience health anxiety in response to Internet searches for medical information. Cyberpsychol Behav Soc Netw 2013; 16(10): 735-9.
53. Fergus TA, Valentiner DP. Intolerance of uncertainty moderates the relationship between catastrophic health appraisals and health anxiety. Cogn Ther Res 2011; 35(6): 560-5.
54. Taylor S. Anxiety sensitivity: Theory, research, and treatment of the fear of anxiety. Mahwah, NJ: Lawrence Erlbaum, 1999.
55. Wheaton MG, Deacon BJ, McGrath PB, Berman NC, Abramowitz JS. Dimensions of anxiety sensitivity in the anxiety disorders: Evaluation of the ASI-3. J Anxiety Disord 2012; 26(3): 401-8.
56. Corcoran KM, Segal ZV. Metacognition in depressive and anxiety disorders: current directions. Int J Cogne Ther 2008; 1(1): 33-44.
57. Bailey R, Wells A. Development and initial validation of a measure of metacognitive beliefs in health anxiety: The MCQ-HA. Psychiatry Res 2015; 230(3): 871-7.
58. Wells A. Metacognitive therapy for anxiety and depression. New York: Guilford Press, 2011.
59. Fergus TA, Spada MM. Cyberchondria: Examining relations with problematic Internet use and metacognitive beliefs. Clin Psychol Psychother 2017; 24(6): 1322-30.
60. McElroy E, Shevlin M. The development and initial validation of the cyberchondria severity scale (CSS). J Anxiety Disord 2014; 28(2): 259-65.
61. Norr AM, Allan NP, Boffa JW, Raines AM, Schmidt NB. Validation of the Cyberchondria Severity Scale (CSS): replication and extension with bifactor modeling. J Anxiety Disord 2015; 31: 58-64.
62. Barke A, Bleichhardt G, Rief W, Doering BK. The Cyberchondria Severity Scale (CSS): German validation and development of a short form. Int J Behav Med 2016; 23(5): 595-605.
63. Jakiša M. Psihosocijalni prediktori internetskog pretraživanja simptoma (Diplomski rad). Zagreb: Sveučilište u Zagrebu, Hrvatski studiji, 2016.
64. Jokić-Begić N, Mikac U, Čuržik D, Sangster Jokić C. The Development of the Short Cyberchondia Scale, 2017 (neobjavljeni rad).
65. Jiang S, Street RL. Pathway linking Internet health information seeking to better health: a moderated mediation study. Health Communication 2017; 32(8): 1024-31.

Faktori rizika i kroničnog tijeka posttraumatskog stresnog poremećaja: pregled suvremenih spoznaja

/ Posttraumatic Stress Disorder Risk and Chronic Course Factors: a Review of Current Findings

Doris Čuržik

Sveučilište u Zagrebu, Filozofski fakultet, Odsjek za psihologiju, Katedra za kliničku i zdravstvenu psihologiju, Zagreb, Hrvatska

/University of Zagreb, Faculty of Humanities and Social Sciences, Department of Psychology, Chair of Clinical and Health Psychology, Zagreb, Croatia

https://orcid.org/0000-0002-5166-1250

Posttraumatski stresni poremećaj je produljena/odgođena reakcija na proživljeni traumatski događaj, koja se očituje psihološkim posljedicama poput izbjegavanja podsjetnika na traumu, ponovnog proživljavanja traumatskog događaja te pojačane pobudljivosti organizma. Desetljeća istraživanja ovog poremećaja rezultirala su proširivanjem spoznaja identifikacijom različitih faktora rizika, zaštitnih faktora te odrednica i korelata akutnog i kroničnog tijeka. Cilj ovog rada pružiti je što obuhvatniji pregled suvremenih spoznaja bioloških, psiholoških i socijalnih faktora rizika i korelata poremećaja kao i odrednica njegovog akutnog i kroničnog tijeka. Nalazi istraživanja ovog područja dotiču područja bioloških, psiholoških te socijalnih faktora u podlozi razvoja ovog poremećaja te ukazuju na potrebu za integrativnim pristupom razumijevanju njegova nastanka. Spoznaje nedovoljno istraženoga, no veoma relevantnoga područja socioekonomskih faktora rizika, također su prikazane. Zaključci mnogih istraživanja ovog područja, posebice njegovog kroničnog tijeka, odnose se na zapreke u smislu poteškoća razlučivanja čimbenika koji su premorbidni faktori od onih koji su posljedica samog tijeka poremećaja.

/ Posttraumatic stress disorder (PTSD) presents a prolonged/delayed reaction to a traumatized event that manifests itself in psychological consequences such as avoiding traumatic reminders, re-experiencing a traumatic event, and intensifying body arousal. Decades of research of this disorder resulted in the expansion of knowledge through the identification of various risk and protective factors, and the determinants and correlates of its acute and chronic course. The aim of this paper is to provide a more comprehensive overview of the current discoveries of biological, psychological, and social factors of risk and correlates of the disorder as well as the determinants of its acute and chronic course. Research findings in this area address the areas of biological, psychological, and social factors underlying the development of this disorder and suggest the need for an integrative approach to understanding its origin. The findings from the understudied, but highly-relevant field of socio-economic risk factors are also presented. The conclusions of a lot of research in this area, particularly its chronic course, are related to obstacles in terms of the difficulty of distinguishing factors that represent premorbid factors than those resulting from the course of the disturbance itself.

PREGLEDNI RAD / *REVIEW* Soc. psihijat. | 47 (2019) | 51-85

ADRESA ZA DOPISIVANJE / *ADDRESS FOR CORRESPONDENCE*:
Dr. sc. Doris Čuržik, dipl. psih.
Sveučilište u Zagrebu
Filozofski fakultet
Odsjek za psihologiju
Katedra za kliničku i zdravstvenu psihologiju
Ivana Lučića 3
10 000 Zagreb, Hrvatska
E-pošta: doriscrzk@yahoo.co.uk

KLJUČNE RIJEČI / *KEY WORDS*:
PTSP / *PTSD*
Faktori rizika / *Risk factors*
Kronični PTSP / *Chronic PTSD*
PTSP i parničenje / *PTSD and reimbursement*
Prospektivne i retrospektivne studije PTSP-a / *PTSD prospective and retrospective studies*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.51

UVOD

PTSP i definicija traumatskoga iskustva

Posttraumatski stresni poremećaj je stanje koje predstavlja neposrednu ili odgođenu/produljenu reakciju na proživljeni traumatski događaj koja se manifestira psihološkim posljedicama poput izbjegavanja podsjetnika na traumu, ponovnog proživljavanja traumatskog događaja (npr. uznemirujući snovi) te pojačane autonomne pobuđenosti organizma. U općoj populaciji prevalencija ovog poremećaja kreće se od 1 % do 14 %, ovisno o metodi prikupljanja podataka i uzorku, no i važećim dijagnostičkim kriterijima. Dijagnostički kriteriji kao i definicija samoga traumatskog događaja u kontekstu ovoga poremećaja, radi višestrukih implikacija, nerijetko su tematika znanstvenih debata o čemu će biti više rečeno u sljedećem poglavlju.

U znanstvenom smislu ovaj se poremećaj spominje već od 19. stoljeća kada ga u svojoj opširnoj studiji Građanskog rata objavljenoj 1871. Jacob Mendez DaCosta spominje pod terminom *vojničko srce* (1). DaCosta je, naime, pokušao dokučiti koji su to čimbenici koji dovode do tako zamjetnih promjena u ratnih veterana kao rezultat bivanja u situaciji intenzivnog stresora odnosno traume. Traumatske situacije koje mogu inducirati ovaj poremećaj gotovo su

INTRODUCTION

PTSD and the traumatic experience definition

Posttraumatic stress disorder PTSD is a condition that presents an immediate or delayed/prolonged reaction to a traumatic event, manifested in psychological consequences such as avoiding traumatic reminders, re-experiencing traumatic events (e.g. disturbing dreams), and increased autonomic reactivity of the body. In the general population, the prevalence of this disorder ranges from 1 to 14%, depending on the method of participant sampling and data collection, but also valid diagnostic criteria. Diagnostic criteria as well as the definition of the traumatic event itself in the context of this disorder, for multiple implications, are often subject to scientific debates, which will be further discussed in the following chapter. In scientific terms, PTSD has been mentioned since the 19th century. In his extensive study of the Civil War published in 1871, Jacob Mendez DaCosta describes this condition under the terms of *the soldier's heart* (1). DaCosta was interested in the factors that lead to such noticeable changes in war veterans as a result of experiencing intense stress or a traumatic situation. Traumatic situations that usually induce this disorder almost always represent some form of life-threatening uvijek neki oblik životne ugroženosti ili prijetnje sigurnosti traumatizirane osobe pri čemu je nerijetko važan i doživljaj bespomoćnosti ili nedostatka kontrole. Situaciju traume često predstavljaju ratna zbivanja, zatočeništvo, logori, silovanje, prirodne katastrofe te prometne nesreće. Nerijetko se radi o situacijama koje su izvan uobičajenog iskustva osobe, odnosno koje bi bile većinu ljudi trauma, stoga ne čudi kako se ovaj poremećaj često naziva „normalnom reakcijom na abnormalne događaje".

Sama definicija traume predmetom je znanstvenih debata. Točnije, nerijetko se postavlja pitanje kriterija kojim neki događaj zadovoljava kvalitetu traumatskoga. U okviru nove inačice Međunarodne klasifikacije bolesti (MKB-11) trauma je definirana *kao ekstremno prijeteći ili užasavajući događaj ili serija događaja* (2). S druge strane, DSM-5 nudi temeljitiju definiciju u kojoj je *osoba izložena smrti, prijetnjom smrti, ozljedi ili prijetnjom ozlijedi te prijetnjom ili stvarnom seksualnom nasilju putem izravne izloženosti, osobnim svjedočenjem te indirektno putem bliske osobe koja je bila izložena traumi*. Prepoznata je i ponavljana ili intenzivna izloženost traumatskim detaljima u okviru profesionalne dužnosti kao okidač posttraumatske reakcije (3).

U novije vrijeme, nova kategorija potencijalnih traumatskih događaja za PTSP sve se više istražuje, a odnosi se na zdravstvena stanja poput poroda te dijagnoza životno ugrožavajućih bolesti poput karcinoma ili kardiovaskularnih bolesti (npr. infarkt). Prema *Modelu dugoročne somatske ugroze* D. Edmonsona (*Enduring Somatic Threat model*) nakon neugodnih iskustava u okviru zdravstvenih smetnji potencijalno se razvija specifični oblik PTSP-a koji je orijentiran na zbivanja u budućnosti, posebice u kognitivnoj domeni. Prema ovome modelu, trauma je tjelesnog podrijetla, nerijetko je kroničnoga tijeka, dok su intruzivne misli povezane sa zbivanjima u budućnosti (npr. povratak maligne bolesti) te visoko kognitivne u svojoj kvaliteti (4). Iako se podatci u okviru ovog područja tek prikupljaju,

situation or a threat to the safety of an individual, with an emphasis on the experience of helplessness or lack of control. These events usually refer to war events, detention, war camps, sexual violence, natural disasters, and traffic accidents. Such experiences often represent events that are beyond the usual experience of a person, or that would be traumatic for most people, so it's no surprise that this disorder is often termed as a "normal reaction to abnormal events". However, the definition of trauma itself is often a subject of scientific debates. More specifically, the question of establishing the criteria by which an event satisfies the quality of a trauma is often discussed by researchers. Within the new version of the International Classification of Diseases (MKB-11), a traumatic event is defined as *an extreme threatening or horrifying event or series of events* (2). On the other hand, DSM 5 provides a more elaborate definition of a traumatic event in a way that *a person is exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence by direct exposure, witnessing in person or indirectly through a close traumatized person*. Repetitive or intense exposure to traumatic details within professional duty as a trigger of a post-traumatic reaction (3) is also recognized.

More recently, a new category of potential traumatic events for PTSD that refer to health conditions such as birth or diagnoses of potentially life-threatening diseases such as cancer or cardiovascular disease (e.g. cardiac arrest) are increasingly investigated. According to the *Enduring Somatic Threat model* by D. Edmonds, a specific form of PTSD oriented towards future events, especially in the cognitive domain, potentially develops after unpleasant experiences within health disturbances. According to this model, trauma is of bodily origin, it is often chronic, while intrusive thoughts are related to future events (e.g. the return of a malignant disease) and highly cognitive in their quality (4). Although the data regarding this area is istraživanja posljednjega desetljeća potvrđuju smjer ovih pretpostavki posebice u području kardiovaskularnih bolesti (5,6), malignih bolesti (7,8) te poroda, kao i njegove vrste (9-11). Iz svega navedenoga nameće se zaključak kako nove kategorije kao i podvrste ovoga poremećaja čekaju svoju temeljitiju znanstvenu potvrdu te ih možemo očekivati u okviru nekih budućih inačica dijagnostičkih klasifikacija bolesti. Upravo su kriteriji novoobjavljenih dijagnostičkih kategorizacija DSM-5 i MKB-11 te njihova problematika za utvrđivanje što sačinjava i uzrokuje ovaj poremećaj predmetom sljedećega poglavlja.

PTSP i problematika dijagnostičkih kriterija

Opis same kliničke slike ovoga poremećaja ovisi uvelike i o aktualnim dijagnostičkim klasifikacijama koje se tijekom godina usklađuju s nalazima suvremenih istraživanja. Tako je u novoj inačici američke DSM klasifikacije (DSM-5) iz 2013. godine PTSP iz kategorije anksioznih premješten u novu kategoriju *Poremećaja vezanih uz traumu i stresore*. Nadalje, iznenadan gubitak bliske osobe zbog prirodne smrti više se ne smatra jednim od traumatskih čimbenika nastanka ovoga poremećaja kao ni nužan doživljaj emocija straha, bespomoćnosti ili strave. Nova klasifikacija donosi i dvije zasebne skupine simptoma koje se odnose na *izbjegavajuće ponašanje* te *negativne promjene u mišljenju i raspoloženju*. Naposlijetku, uključena su i tri nova simptoma koja se javljaju nakon traume u razmatranju dijagnoze PTSP-a. Spomenuti se odnose na *pretjerano negativne misli i pretpostavke o sebi i svijetu* kao i *negativan afekt* te *nesmotreno* ili *destruktivno ponašanje*. Što se samoga tijeka poremećaja tiče DSM-5 ne čini više razliku između kroničnoga te akutnoga tijeka PTSP-a, no zahtijeva da smetnje traju duže od mjesec dana za postavljanje dijagnoze (3).

Iako prema novoj DSM kategorizaciji akutni i kronični tijek ovoga poremećaja više ne po-

still being collected, findings of recent research confirm the direction of these assumptions, particularly in the field of cardiovascular disease (5,6), malignant diseases (7,8), and different kinds of birth (9-11). Therefore, it can be concluded that new categories and subtypes of this disorder are waiting for their more thorough scientific confirmation and we can expect for them to appear within some future versions of the diagnostic classifications of this disease.

The next chapter deals with the aforementioned issues arising from the new DSM 5 and ICD-11 PTSD diagnostic criteria.

PTSD and the diagnostic criteria issues

The clinical description of PTSD is largely dependent on current diagnostic classifications that are aligned with the findings of recent research. Thus, in the new version of the American DSM Classification (DSM 5), PTSD is removed from the category of Anxiety Disorders and has been placed to a new category of Trauma and Stress Disorders. Furthermore, the sudden loss of a close relative due to natural death is no longer considered to be one of the traumatic factors of the emergence of this disorder, nor is the experience of the emotion of fear, helplessness, or horror a necessary factor for diagnosing this disorder. The new classification also brings two separate groups of symptoms related to avoidance behaviour and negative alterations in cognitions and mood. Finally, there are three new symptoms that must occur after trauma for considering the diagnosis of PTSD. The above mentioned are related to excessively negative thoughts and assumptions about oneself and the world, negative affect, and reckless or destructive behaviour. As far as the course of the disorder itself is concerned, DSM-V does not differentiate between the chronic and acute course of PTSD but requires that the disturbances last stoje, kliničko iskustvo te mnoga istraživanja ovoga područja ukazuju kako se ovaj poremećaj može očitovati raznoliko (duljinom i kliničkom slikom) u različitih pojedinaca. Isto potkrepljuje i zanimljiva činjenica kako nova kategorizacija unutar DSM-5 omogućava 636 120 različitih kombinacija u simptoma PTSP-a u okviru kojih je moguće postaviti dijagnozu istoga, dok je prethodna (DSM-IV-TR) omogućavala 79 794 kombinacije (12). Stoga je moguće postaviti i hipotetsko pitanje količine različitih kombinacija produljenoga tijeka ovoga poremećaja koje se mogu pojaviti u različitih pojedinaca. Istraživanja tijeka PTSP-a pokazuju kako stope spontanih oporavaka u prvoj godini nakon traume iznose oko 50 % (13,14) te da oko jedna trećina pacijenata ima PTSP s odgođenim početkom (15-17). Dok su ove studije poboljšale naše razumijevanje rizika i tijeka PTSP-a, dugoročni tijek kroničnog PTSP-a ipak ostaje nejasnijim, jer je većina ovih istraživanja usmjerena istraživanju prve godine nakon traume.

Nadalje, definicija ovog poremećaja dodatno se komplicira objavom nove inačice Međunarodne klasifikacije bolesti (MKB-11) (2). Svrha nove inačice bila je ostvarivanje razlikovanja između normalnih reakcija na stresore i PTSP-a, kao i pojednostavljenje utvrđivanja dijagnoze. Kriteriji su stoga izdvojeni u svega tri kategorije iz kojih je potrebno zadovoljiti po dva simptoma. Kategorije se odnose na (1) *ponovno proživljavanje traumatskog događaja*, (2) *izbjegavanje podsjetnika na traumu*, te (3) *intenzivni doživljaj postojeće prijetnje*. Simptomi moraju trajati mjesec dana ili duže te je potrebno narušeno funkcioniranje u barem jednom području života pojedinca. No, tolerira se i odgođena reakcija na traumatski događaj na više od 6 mjeseci nakon samog iskustva. Nadalje, MKB-11 razlikuje također i kategoriju kompleksnog PTSP-a koji je definiran kao *reakcija pojedinca nakon izloženosti višestrukim traumatskim događajima ili onima produljenoga trajanja iz kojih je izlazak nemoguć ili izrazito*

longer than one month (3). Although according to the new DSM-V categorization the acute and chronic course of this disorder no longer exist, clinical experience and a lot of research in this area indicate that this disorder can be manifested in a variety of forms in different individuals. The latter is further confirmed by the fact that the new categorization within DSM-V allows for 636,120 different combinations of PTSD symptoms within which it is possible to diagnose it, while the previous (DSM-IV-tr) enabled for 79,794 combinations (12). Therefore, a hypothetical question of the quantity of different combinations of the prolonged course of this disorder that may occur in different individuals also arises. PTSD studies show that spontaneous recovery rates in the first year after trauma account for about 50% (13,14), and about one third of patients have a delayed onset of PTSD (15-17). While these studies have improved our understanding of the risk factors and the course of PTSD, the long-term course of chronic PTSD remains unclear, as most of these studies focus on the first year following trauma. Furthermore, the definition of this disorder is further complicated by the publication of the new version of the International Classification of Diseases (ICD-11) (2). The purpose of the new diagnostic criteria concerning PTSD was to make a distinction between normal stress responses and PTSD as well as to simplify diagnosing the disorder. Criteria are therefore separated into only three categories from which two symptoms should be met. The categories are related to (1) re-experiencing a traumatic event, (2) avoidance of traumatic reminders, and (3) an intense experience of an existing threat. Symptoms must last for a month or longer and require the presence of impaired functioning in at least one area of an individual's life. However, a delayed reaction to a traumatic event for more than 6 months after the experience itself is tolerated. Furthermore, ICD-11 distinguishes between the category of complex PTSD that is defined as an individual's *težak* (2). Osim zadovoljenja po dva simptoma iz prethodne tri kategodije, ova dijagnoza obuhvaća još tri koje se odnose na *teškoće samoorganizacije*. Navedeni se odnose na *teškoće regulacije raspoloženja*; *negativno samopoimanje* te *narušeno interpersonalno funkcioniranje*.

Može se reći kako je glavna tema MKB-11 kriterija u okviru dijagnostike PTSP-a prepoznavanje dijagnoza od istaknutog kliničkog značenja. Prijedlozi novih dijagnostičkih kriterija naišli su na brojne reakcije znanstvene zajednice. Istraživači ovog područja upozoravaju kako će ti prijedlozi potencijalno štetiti pojedincima s lakšim i umjerenim oblicima ovoga poremećaja kojima će potencijalna pomoć, radi izostanka zadovoljenja kriterija, možda biti uskraćena. Istraživanje Wiscoa i suradnika potvrdilo je kako predloženi PTSP kriteriji u okviru MKB-11 identificiraju značajno manje pojedinaca s ovom dijagnozom od DSM-5 i IV, posebice protokom vremena (18). Istovremeno, novi kriteriji MKB-11 nisu doveli u ovome istraživanju do smanjenja komorbidnih dijagnoza, što je bio jedan od ciljeva nove inačice MKB-11. Stoga je preporuka istraživača kliničarima uzeti u obzir cjelokupno stanje pojedinca, mimo strogoga razvrstavanja smetnji u predložene dijagnostičke kategorije (19). Potonje je veoma važno uzeti u obzir radi potencijalne zdravstvene pomoći ili naknade za koju bi pojedinci mogli biti uskraćeni.

PTSP te problematika traženja naknade i parničenja

U razmatranju različitih faktora koji doprinose održavanju PTSP-a upravo se još nedovoljno istražen proces parničenja i traženja naknade čini osobito važnim. Stoga je pružanje pregleda istraživačkih nalaza i unutar ovoga područja predstavlja jedan od važnijih motiva pisanja ovoga preglednoga rada. Naime, istraživanja pokazuju kako osobe koje traže novčanu naknadu imaju izraženije smetnje u okviru dija-

reaction after exposure to multiple traumatic events or those of prolonged duration from which the escape is impossible or extremely difficult (2). Apart from meeting the two symptoms from the first three categories, this diagnosis includes three more that relate to the difficulties of self-organization. These are related to mood regulation problems; negative self-concept and impaired interpersonal functioning. It can be argued that the main theme of the ICD-11 criteria regarding the diagnosis of PTSD is to recognize the diagnosis of clinical significance. Proposals for new PTSD diagnostic criteria within the new edition of ICD-11 have met numerous critiques and reactions of the scientific community. Researchers of this area warn that individuals with mild or moderate forms of this disorder may be potentially harmed by these criteria in a way that they could be denied potential help due to the lack of criteria for PTSD being met. Research by Wisco and associates has confirmed that the proposed PTSD criteria under ICD-11 identify significantly fewer individuals with this disease against DSM-5 and IV criteria, especially with the passage of time (18). At the same time, the new ICD-11 criteria did not lead to a reduction of comorbid diagnoses in this study, which was one of the goals of the new ICD-11 edition regarding PTSD. Therefore, the recommendation to clinicians is to consider the overall condition of an individual, rather than making a strict classification of their disturbances against the proposed diagnostic categories (19). The latter is very important to consider for the purpose of potential health care or compensation that could be denied to these individuals.

PTSD and the problem of litigation and seeking compensation

In consideration of the various factors contributing to the maintenance of PTSD, the issue of litigation and compensation seeking gnoze PTSP-a od pojedinaca s ovim poremećajem koji su izvan procesa traženja naknade i parničenja (20-22). Znanstvenici su opažene nalaze pokušali razjasniti u okviru tri moguća razjašnjenja. Spomenuti se odnose na hipoteze *stvarne narušenosti funkcioniranja* (*disability hypothesis*), *traženja financijske dobiti* (*finantial gain hypothesis*) kao i *hipoteze pojačanoga stresa* (*stress hypothesis*) (23). Iz navedenoga jasno je kako veza između izraženosti simptoma PTSP-a i traženja financijske dobiti nije sasvim jednostavna i razjašnjena. Stoga je ovo područje važan aspekt u istraživanju faktora rizika za kronični tijek ovoga poremećaja. Dostupni nalazi istraživanja ovoga područja opisani su unutar posljednjeg poglavlja *Socioekonomskih faktora*.

Zbog složenosti kliničke slike te nerijetko dugotrajnog i multidimenzionalnog pristupa liječenju ovaj je poremećaj već dugi niz godina predmet brojnih znanstvenih studija. Istraživačka pitanja često se odnose na razmatranja različitih faktora rizika za razvoj poremećaja, poput bioloških i psiholoških ranjivosti, tijeka oporavka kao i procjene učinkovitosti različitih terapijskih tretmana PTSP-a u ovisnosti o tipu traume kao i rodu traumatizirane osobe.

Na osnovi svega navedenoga, cilj ovoga rada ponuditi je pregled suvremenih istraživanja faktora rizika te tijeka posttraumatskog stresnog poremećaja. Kako se radi o veoma kompleksnom poremećaju očigledno je kako je sam nastanak ovog poremećaja rezultat interakcije različitih elemenata, poput bioloških (anksiozni prag, interoceptivna svjesnost), psiholoških, socijalnih te nedovoljno istraženih faktora socioekonomskog statusa pregledom kojih biva zaključen cjelokupni pregled. Stoga je jasno kako utvrđivanje različitih faktora rizika za razvoj PTSP-a pruža obuhvatniji odgovor na pitanje tko će s većom vjerojatnošću razviti PTSP kao odgovor na traumatsko iskustvo, a tko neće.

still remains under investigated. Hence, exploration of research findings within this area is one of the key motives for writing this review paper. Namely, research has shown that people seeking financial compensation have more severe symptoms within the PTSD diagnosis than individuals with this disorder that are not seeking reimbursement (20-22). The researchers of this area argue that these findings could be clarified within three possible explanations. These refer to the *disability hypothesis, financial gain (hypothesis), and stress hypothesis* (23). From the above mentioned it is clear that the link between the expression of PTSD symptoms and seeking financial gain is not quite so simple or clarified. Therefore, this area represents an important aspect within the studies of various risk- and chronic course factors of this disorder. The available research findings in this area are described within the last chapter of this paper that refers to *Socioeconomic Factors*. Due to the complexity of its clinical manifestation and the often long-term and multidimensional approach to treatment, this disorder has been the subject of numerous scientific studies for many decades. Research questions often relate to consideration of various risk factors for the development of this disorder such as biological and psychological vulnerabilities, recovery rates, and assessment of the effectiveness of various PTSD therapeutic treatments depending on the type of trauma. Therefore, the aim of this paper is to provide an extensive overview of current findings on PTSD risk factors. Since PTSD is a very complex disorder, it is obvious that the very occurrence of this disorder is the result of the interaction of various elements. The above mentioned refer to biological (anxiety threshold, interoceptive sensitivity/consciousness), psychological, social, and insufficiently investigated factors of socioeconomic status. It's therefore clear that determining the various risk factors important for the development of PTSD provides a more comprehensive answer to a question of who

METODOLOGIJA

U okviru nastanka ovoga rada pretražene su internetske baze znanstvenih časopisa *Science Direct, PubMed, PsychInfo i Researchgate* tijekom razdoblja od svibnja 2013. do svibnja 2018. godine za ključne riječi koje se tiču faktora rizika i kroničnoga tijeka PTSP-a. Termini za pretraživanje uključivale su kombinaciju riječi PTSD/PTSP i sljedećih fraza i/ili termina na engleskom i hrvatskom jeziku: *risk factors*/faktori rizika, *chronic course*/kronični tijek, *anxiety sensitivity*/anksiozna osjetljivost, neuroticism/*neuroticizam*, osobine ličnosti/*personality traits*, *neurobiology/*neurobiologija, *genetics*/genetika, *brain imagery*/mozgovni zapisi, *anxiety*/anksioznost, *depression*/depresija, *comorbidity*/ komorbiditet, *reimbursement, compensation*/parničenje. Odabir radova s obzirom na relevantnost teme rezultirao je konačnim odabirom 177 publikacija čiji su rezultati spomenuti u ovom preglednom radu. S obzirom na općenito manju količinu prospektivnih longitudinalnih studija ovoga područja objedinjeni su dostupni istraživački rezultati objavljeni u razdoblju od 1988. do 2018. godine.

FAKTORI RIZIKA ZA RAZVOJ POSTTRAUMATSKOG STRESNOG POREMEĆAJA

Faktore rizika za razvoj posttraumatskog stresnog poremećaja možemo radi preglednosti podijeliti u nekoliko većih skupina. To su faktori koji proizlaze iz osobina ličnosti i strategija suočavanja, psihijatrijske povijesti i komorbidnih stanja poput poremećaja ličnosti, vjerovanja i atribucija te bioloških faktora i socijalnih okolnosti.

Osobine ličnosti

Kada faktore rizika za razvoj posttraumatskog stresnog poremećaja sagledavamo iz aspekta osobina ličnosti, jedna je osobina posebice

will most likely develop PTSD in response to a traumatic experience and who will not.

METHODS

The Internet databases of Science Direct, PubMed, PsychInfo, and Researchgate were searched over the period from May 2013 to May 2018 for keywords related to risk factors and chronic PTSD. The search terms included a combination of the word PTSP and the following phrases and/or terminology in English and Croatian: risk factors, chronic course, anxiety sensitivity, neuroticism, personality traits, neurobiology, genetics, brain imagery, anxiety, depression, comorbidity, litigation, reimbursement, compensation. The selection of papers with respect to relevance of the topic resulted in the final selection of 177 publications whose results are mentioned in this review paper. Considering the generally smaller amount of prospective longitudinal studies in this area, the current review gathered the available research results published during the period from 1988 to 2018.

PTSD RISK FACTORS

Risk factors important for the development of PTSD can be divided into several major groups. These refer to the factors that arise from personality traits and coping strategies, psychiatric history, and comorbid states such as personality disorders as well as biological factors and social circumstances.

Personality traits

When considering personality traits as risk factors for the development of PTSD, one trait seems to be particularly salient within this context. The latter refers to neuroticism - a trait that represents a permanent tendency to re-izražena u ovom kontekstu. Riječ je o neuroticizmu, odnosno osobini koja se manifestira trajnom sklonošću k reagiranju na događaje negativnim afektom, uključujući anksioznost te depresivnost (24). Neuroticizam je značajno povezan s PTSP-om (25,26) i faktor je rizika za razvoj posttraumatskog stresnog poremećaja nakon izlaganja traumatskom događaju (27). Jedan od nalaza koji pokazuje koliko je ova osobina značajna za nastanak PTSP-a je taj da je izrazito naglašen neuroticizam faktor rizika nezavisan od izloženosti borbi koji je dobiven na uzorku stotine veterana vijetnamskog rata s posttraumatskim stresnim poremećajem (28) i doprinosi više objašnjavanju varijance simptoma PTSP-a od samih ratnih iskustava (29-32). Istraživanje O'Toolea, Marshalla, Schurecka i Dobsona (33) na slučajnom uzorku australskih ratnih veterana s dijagnozom PTSP-a i bez te dijagnoze pokazalo je kako su rezultati na ljestvici neuroticizma uoči novačenja za vojsku bili kasnije povezani s razvojem PTSP-a. Slični rezultati (povezanost neuroticizma ili anksioznosti i posttraumatskih reakcija) dobivaju se i na uzorku osoba oboljelih od civilnog PTSP-a zbog različitih vrsta traumatskih događaja (34-37). Brojna istraživanja ovoga područja također ukazuju na povezanost PTSP-a i ostalih osobina ličnosti poput primjerice negativne emocionalnosti, traženja novosti, sklonosti hostilnosti i ljutnji i anksioznosti kao osobine ličnosti (38). Također, negativno je povezan s ekstraverzijom, optimizmom te kombinacijom visoke pozitivne i niske negativne emocionalnosti (39). Potonje ukazuje na potrebu obuhvatnijeg, odnosno multidimenzijskog pristupa u razmatranju odnosa i uloge različitih potencijalnih faktora rizika u nastanka PTSP-s. Istraživanja su također pokazala kako je nisko izražena osobina *smjelosti* (engl. *hardiness)* doprinosila objašnjenju veće varijance simptoma PTSP-a nego sami traumatski događaji (40). Nadalje, u prospektivnom istraživanju Tomassena i sur. (41) *smjelost* je imala indirektan utjecaj na smanjenje simptoma PTSP-a u norveških voj-

act to events with a negative affect, including anxiety and depression (24). Neuroticism is significantly associated with PTSD (25,26) and presents a risk factor for the development of PTSD after exposure to a traumatic event (27). One of the findings showing the significance of this trait for the emergence of PTSD is that high neuroticism presents a risk factor independently of exposure to combat in Vietnam veterans with PTSD (28). This trait also contributes more to the explanation of the variance of PTSD symptoms than war experiences themselves (29-32). The research of O'Toole, Marshall, Schureck, and Dobson (33) on a random sample of Australian veterans with and without PTSD showed that the results on the neuroticism scale in military recruits were later related to the development of PTSD. Similar results (association of neuroticism or anxiety and posttraumatic reactions) were also obtained on a sample of individuals with PTSD developed as a result of various types of traumatic events (34-37). Ample research in this area also points to the correlation between PTSD and other personality traits, such as negative emotionality, seeking novelty, hostility, and anger and trait anxiety (38). PTSD is also negatively associated with extraversion, optimism, and combination of high positive and low negative emotionality (39). The latter points to the need for a more comprehensive or multidimensional approach to the consideration of the relationship and role of the various potential risk factors in the emergence of PTSD. Studies have also shown that the low expression of *hardiness* contributed to the explanation of a greater variation of PTSD symptoms than traumatic events themselves (40). Furthermore, in a prospective study by Tomassen et al. (41) hardiness has had an indirect impact on reducing PTSD symptoms in Norwegian soldiers via reduced use of avoidance strategies - another risk factor significant for the emergence of PTSD. Hardiness is a feature that represents a set of personality traits that act as a protective factor in dealing nika djelujući na smanjeno korištenje strategija izbjegavanja - još jednoga od fakora rizika za nastanak PTSP-a. Riječ je o osobini koja je skup osobina ličnosti koje djeluju kao zaštitni faktor pri suočavanju s traumatskim iskustvom (42). Ova osobina djeluje mehanizmima viđenja stresne situacije zanimljivom i punom značenja za pojedinca koji istovremeno stresore procjenjuje podložnima kontroli. Također, promjena je viđena kao mogućnost osobnog rasta te je procijenjena normalnim dijelom života. Još jednu od osobina za koju se pretpostavlja kako mnogostrukim putevima djelovanja uvećava rizik za pojavu PTSP-a je anksiozna osjetljivost.

Anksiozna osjetljivost

Anksiozna osjetljivost je veoma važan faktor u razmatranju nastanka posttraumatskog stresnog poremećaja (43). Riječ je o osobini koja predstavlja strah od unutarnjih promjena (tjelesnih, mentalnih, socijalne brige) radi uvjerenja kako su te promjene ugrožavajuće za dobrobit pojedinca. Pretpostavka je kako je ova osobina faktor rizika putem dva zasebna mehanizma djelovanja (44). Pojedinci s visokim razinama ove osobine mogu reagirati intenzivnije na traumatski stresor pri čemu će im dodatan izvor stresa biti i zabrinutost zbog vlastitih reakcija na stresor. Spomenuto potencijalno umanjuje i prag potreban za stresnu reakciju povećavajući spektar situacija koje bi kod pojedinca mogle potaknuti pojavu posttraumatskog stresa. Drugi mehanizam pretpostavlja kako traumatska situacija može potaknuti pojavu PTSP-a i anksiozne osjetljivosti koja tada povratno uvećava intenzitet simptoma. Dosadašnji istraživački napori općenito potvrđuju pretpostavku o anksioznoj osjetljivosti kao faktoru rizika za pojavu PTSP-a (45-48). Feldner i sur. (49), primjerice, u prospektivnoj su studiji utvrdili kako je anksiozna osjetljivost značajan prediktor simptoma PTSP-a u uzorku 400 mladih odraslih osoba tijekom razdoblja praćenja od 18 mjeseci. Boffa

with traumatic experience (42). This feature works via mechanisms of perceiving a stressful situation as interesting and full of meaning for an individual who at the same time perceives stressors as controllable. Also, these individuals perceive change as a potential for personal growth and view it as a normal part of life.

The next section is devoted to the trait of anxiety sensitivity - another feature that is assumed to increase the risk for PTSD in multiple ways.

Anxiety sensitivity

Anxiety sensitivity presents an important factor in considering the emergence of PTSD (43). This feature refers to fear of internal changes (physical, mental, social worries) due to a belief that an individual's wellbeing is being endangered. It's hypothesized that this feature presents a risk factor through two separate mechanisms of action (44). Individuals with high levels of this trait may react more intensively to a traumatic stressor, with worry (that arises as a result of their own reactions to the stressor) being an additional source of stress. This potentially reduces the threshold required for a stress response by increasing the range of situations that could cause an individual to develop posttraumatic stress. Another mechanism assumes that a traumatic situation may trigger the onset of PTSD and anxiety sensitivity, which then increases the intensity of the PTSD symptoms. Previous research generally confirms the assumption of anxiety sensitivity being a risk factor for the occurrence of PTSD (45-48). In prospective studies, Feldner et al. (49), for example, found that anxiety sensitivity was a significant predictor of PTSD symptoms in a sample of 400 young adults during an 18-month follow-up period. Boffa et al. (50) investigated whether elevated anxiety sensitivity before the traumatic event is a risk factor for posttraumatic stress symptoms. The results of their study showed that pretraumatic elevati sur. (50) istražili su je li povišena anksiozna osjetljivost prije traumatskoga događaja faktor rizika za pojavu simptoma posttraumatskoga stresa. Rezultati njihove studije pokazali su kako je upravo pretraumatska povišena anksiozna osjetljivost predviđala simptome posttraumatskog stresa (PTSS) u skupini američkih studenata izloženih na različiti način pucnjavi na sveučilištu. Također, tjelesna komponenta anksiozne osjetljivosti djelovala je u interakciji sa stupnjem izloženosti traumatskom događaju na intenzitet izraženosti simptoma PTSS-a (50). Nadalje, Marshall, Miles i Stewart (44) istražili su longitudinalnim nacrtom vremenski odnos anksiozne osjetljivosti i intenziteta simptoma PTSP-a neposredno nakon tjelesne ozljede te nakon 6 i 12 mjeseci u 677 sudionika. Utvrđeno je kako i anksiozna osjetljivost i intenzitet simptoma PTSP-a međusobno djeluju recipročnim putem. Točnije, anksiozna osjetljivost predviđala je izraženost simptoma PTSP-a, kao što su i potonji predviđali kasniju izraženost osobine anksiozne osjetljivosti (44). Nadalje, čini se kako je anksiozna osjetljivost povezana i sa smanjenim mogućnostima samoregulacije pojedinca u kontekstu procesiranja emocionalnih podražaja (51) te sposobnostima postizanja *usredotočene svjesnosti* (engl. *mindfulness*) (52). Točnije, čini se kako su pojedini faktori unutar spomenute osobine potencijalne karakteristike pojedinca koje stvaraju veći rizik za razvoj PTSP-a. U istraživanju Schoorlove i Van Der Doesa (52) faktori usredotočene svjesnosti koji se odnose na *mogućnosti opisivanja iskustva*, *prihvaćanje bez osuđivanja* te *odsustvo reagiranja na unutarnje iskustvo* bili su u sudionika negativno povezani sa simptomima PTSP-a te depresivnom simptomatikom (52). Nadalje, ovi su faktori predviđali zasebnu varijancu simptoma PTSP-a nezavisno od varijabli anksiozne osjetljivosti i intenziteta traume (52). Faktori *mogućnosti opisivanja iskustva*, *prihvaćanje bez osuđivanja* te *djelovanje sa svjesnošću* predviđali su zasebnu varijancu simptoma depresije u osoba s PT-

ed anxiety sensitivity predicted posttraumatic stress (PTSS) symptoms in a group of American students exposed to different proximities to a shooting situation at their university. Also, the bodily concerns component of anxiety sensitivity has interacted with the degree of exposure to a traumatic event in predicting the intensity of PTSS symptoms (50). Furthermore, Marshall, Miles, and Stewart (44) investigated the temporal relationship of anxiety sensitivity and the intensity of PTSD symptoms immediately after physical injury and 6 and 12 months later on a sample of 677 participants. It was found that both anxiety sensitivity and the intensity of the PTSD symptoms interacted with each other in reciprocal ways. More specifically, anxiety sensitivity predicted the expression of PTSD symptoms, and the latter predicted a later expression of anxiety sensitivity (44). Furthermore, anxiety sensitivity seems to be associated with reduced possibilities of self-regulation of the individual in the context of processing emotional stimuli (51) and the ability to achieve mindfulness (52). Specifically, it appears that the individual variations within the aforementioned traits represent potential characteristics of an individual that pose a higher risk for PTSD development. In the research of Schoorl and Van Der Does (52), mindfulness questionnaire factors regarding the ability to Describe (experiences), Accept without Judgement, and Non-Reactivity to Inner Experience were negatively associated with symptoms of PTSD and depressive symptoms (52). Furthermore, these factors explained additional variance of PTSD symptoms independently of the anxiety sensitivity and traumatic intensity variables (52). Factors related to the ability to Describe (experiences), Accept without Judgement, and Act with Awareness accounted for a separate variance of depression symptoms in PTSD individuals independently of the cognitive reactivity variables and the amount of traumatic experiences (52). As can be seen from the described results, comorbid

SP-om nezavisno od varijabli kognitivne reaktivnosti te količine traumatskih iskustava (52). Kao što je vidljivo iz posljednjega primjera, komorbidne smetnje poput primjerice depresije, nerijetko se pojavljuju združeno sa smetnjama iz kruga PTSP-a.

Komorbiditet kao faktor rizika

Kao što je navedeno u uvodu poglavlja, osim određenih osobina ličnosti, prijašnje psihičke teškoće, odnosno psihijatrijska povijest te komorbidni poremećaji ličnosti također su faktori rizika koji doprinose razvoju PTSP-a. Prema Kessleru (53) osobe s posttraumatskim stresnim poremećajem imaju veću količinu peritraumatskih psihijatrijskih dijagnoza. U studiji Kulke i suradnika (54) prethodna dijagnoza anksioznog poremećaja pokazala se najznačajnijim faktorom rizika za razvoj PTSP-a u vijetnamskih veterana, dok je u drugom istraživanju bilo koja dijagnoza s Osi I tadašnjega DSM-IV bila povezana s dvostruko većom razinom dijagnoze PTSP-a u istraživanju Northa i suradnika (55). Čini se kako dugogodišnja dijagnoza poremećaja strukture ličnosti, posebice antisocijalnog poremećaja ličnosti, također povećava rizik od nastanka ratnog PTSP-a zbog traumatskog događaja (54). Što se ratnog PTSP-a tiče, povijest dječjeg antisocijalnog ponašanja bila je povezana s razvojem PTSP-a (56), dok je dijagnoza dječjeg poremećaja u ophođenju bila povezana s vjerojatnošću izlaganja traumatskom događaju kao i PTSP-om (57). Niža inteligencija faktor je rizika za izlaganje budućim traumatskim događajima te PTSP-a nakon izlaganja traumatskom događaju (58). Štoviše, prospektivne longitudinalne studije djece u rizičnim područjima pokazale su kako se čini da viša inteligencija reducira rizik za oboljenje od psihijatrijskog poremećaja (59,60) uključujući PTSP (61). Naposlijetku, meta-analiza Brehove i Seidlera (62) pokazala je kako je i stanje peritraumatske disocijacije rizik za kasniji razvoj PTSP-a. Ova se osobina

conditions such as depression often occur together with PTSD disturbances. Therefore, the purpose of the next paragraph is to provide relevant research findings regarding the area.

Comorbidity as a risk factor

As stated in the Introduction, apart from certain personality traits, previous mental problems, psychiatric history and comorbid personality disorders also represent risk factors that contribute to the development of PTSD. According to Kessler (53), people with PTSD have a higher amount of peritraumatic psychiatric diagnoses. In the study of Kulke et al. (54), an earlier diagnosis of an anxiety disorder was the most significant risk factor for the development of PTSD in Vietnamese veterans, while in the second study, any diagnosis from the DSM IV Axis I was associated with a twice higher probability of a PTSP diagnosis in the research of Northa et al (55). It appears that the long-term diagnosis of a personality disorder, particularly the antisocial personality disorder, also increases the risk for the emergence of PTSD due to a traumatic war event (54). As far as war PTSD is concerned, the history of child antisocial behavior was related to the development of PTSD in later life (56), while a diagnosis of childhood conduct disorder was associated to a higher probability of an exposure to a traumatic event in later life as well as PTSD (57). Lower intelligence is a risk factor for exposure to future traumatic events and post-exposure PTSD.

Moreover, prospective longitudinal studies of children in high-risk areas have shown that higher intelligence reduces the risk of psychiatric disorders (59,60), including PTSD (61). Finally, a meta-analysis by Brehove and Seidler (62) showed that the state of peritraumatic dissociation is also a risk for a later development of PTSD. This characteristic refers to the subjective experience of emotional numbing, distancodnosi na subjektivni doživljaj emocionalne otupjelosti, distanciranja od drugih, smanjene reaktivnosti, depersonalizacije i derealizacije u trenutku zbivanja traumatskog događaja. Iako je u trenutku njezine pojave pojedinac trenutačno *zaštićen* od apsolutnog doživljaja traume, pretpostavka je kako ona dugoročno šteti ometajući integraciju traumatskog iskustva unutar eksplicitnog pamćenja pojedinca (63,64).

Kognitivni faktori

Posebna skupina faktora rizika za razvoj PTSP-a proizlazi iz kognitivne sfere, odnosno načina na koji ljudi pridaju značenje događajima i kako ih tumače. Pojedinčeva vjerovanja mogu djelovati raznoliko na smjer oporavka nakon traumatskog iskustva, štiteći ga ili olakšavajući nastanak smetnji. Primjerice, zaštitnim faktorima za razvoj ovog poremećaja nakon fizičkog napada pokazala su se vjerovanja o vlastitioj vrijednosti, sigurnosti i povjerenju u druge (65). Vjerovanje da svijet funkcionira na način kojeg opisuju značenje i koherentnost također predstavlja zaštitni faktor kao i pozitivna vjerovanja o vlastitoj samoefikasnosti (66-68).

S druge strane, u slučaju PTSP-a, četiri su se kognitivna elementa, odnosno vjerovanja pokazala značajnim za razvoj ovog poremećaja. To su: procjena događaja kao ugrožavajućeg; vjerovanja o osobnoj ranjivosti; pokušaji pripisivanja posebnog značenja događaju te vjerovanja o količini osobne kontrole (69). Procjena vlastite ranjivosti kao i ograničeni kapaciteti za suočavanje s izazovima (70,71), niska samoučinkovitost (72,73), procjena štetnosti te pridavanje zastrašujućih značenja događajima (74-76) vjerovanja su koja su povezana s razvojem posttraumatskih poremećaja. Još jedan od kognitivnih faktora rizika za razvoj PTSP-a je i pojedinčeva procjena štetnosti simptoma poput intruzivnih misli (77-79). Jedan od značajnih faktora u pripisivanju značenja traumatskom događaju

ing from others, reduced reactivity, depersonalization, and derealization at the moment of the occurrence of a traumatic event. Although at the time of its occurrence, peritraumatic dissociation protects an individual from the absolute trauma experience, it is assumed that it acts harmfully in the long term by hindering the integration of the traumatic experience within the explicit memory of the individual (63,64).

Cognitive factors

A particular group of risk factors for the development of PTSD results from the cognitive sphere, or the ways people ascribe meaning to events and how they interpret them. Individual beliefs can work differently on the direction of recovery after a traumatic experience, protecting it or facilitating the occurrence of disturbances. For example, beliefs about one's own value, safety and trust in others appeared to be protective factors for the development of this disorder after a physical attack (65). The belief that the world functions in a way that produces meaning and coherence is also a protective factor, as well as positive beliefs about one's self-efficacy (66-68). On the other hand, in the case of PTSD, four cognitive elements, or beliefs, have proven to be significant for the development of this disorder. These are: assessment of the event as a threat; beliefs about personal vulnerability; attempts to attribute special significance to the beliefs about the amount of personal control (69). Estimated self-vulnerability as well as limited capacity to deal with challenges (70,71), low self-efficacy (72,73), attachment of harmful or horrific meanings to events (74-76) are beliefs that are associated with the development of posttraumatic disorders. Another cognitive risk factor for the development of PTSD refers to the individual's assessment of the harmfulness produced by PTSD symptoms such as intrusive thoughts (77-79). One of the important factors in ascribing significance to a traumatic event is je i atribucija odgovornosti te lokus kontrole, odnosno koncept koji se odnosi na pripisivanje kontrole, odgovornosti i krivnje unutarnjim ili izvanjskim faktorima. Posttraumatski stresni poremećaj povezan je s pripisivanjem kontrole izvanjskim uzrocima (80), dok druga istraživanja ukazuju na kompleksan odnos između tijeka poremećaja i lokusa kontrole u ovisnosti o vrsti traumatskog događaja što je detaljnije pojašnjeno u poglavlju koji razrađuje faktore kroničnog tijeka poremećaja.

U novije se vrijeme još jedan kognitivni faktor rizika za anksiozne poremećaje ističe unutar istraživanja ovog poremećaja. Riječ je o *kognitivnom stilu strepnje* koji se odnosi na stabilnu sklonost pojedinca viđenju prijetnje kao brzo napredujuće u vremenu i prostoru (81). Dosadašnji nalazi otkrivaju kako je simptomatika PTSP-a umjereno povezana s kognitivnim stilom strepnje (82,83). Iako tek u začetku, dosadašnji nalazi ukazuju kako manifestacije ovog kognitivnog stila u obliku pristrane obrade informacija, pažnje i pamćenja vezanih uz prijetnju podržavaju njegovu važnost kao faktora rizika za razvoj PTSP-a (84-88).

Kumulacija stresora i traumatskih iskustava

Osim bioloških faktora, osnovna pretpostavka aktualnog modela „kumulacije stresora" u nastanku PTSP-a (engl. *stressor-dose* model) je kako gomilanje proživljenih nedaća tijekom života doprinosi nastanku poremećaja te kako veća količina odnosno intenzitet traumatskog događaja uvjetuje veći intenzitet posttraumatskog stresnog poremećaja (89). Prijašnji višestruki traumatski događaji, posebice nasilje u obliku napada, su najjači faktor rizika za razvoj PTSP-a u populaciji (90), u veterana (91), silovanih žena (92) i među onima koji su razvili PTSP kao odgovor na napad u SAD-u 11. rujna (93). Iako je literatura puna nalaza koji potvrđuju povezanost količine traumatskih

the attribution of responsibility and the locus of control, that is, the concept of attributing control, responsibility and guilt to internal or external factors. PTSD is often associated with attribution of control to external agents (80) while other studies suggest a complex relationship between the course of the disturbance and the locus of control in dependence on the type of a traumatic event. The latter is explained in more detail in the chapters that deal with factors contributing to PTSD's chronic course. In recent times, one more cognitive risk factor for anxiety disorders is highlighted within the studies of this disorder. This refers to the looming cognitive style - a stable tendency of an individual to perceive a threat as rapidly rising in risk and intensity through time and space (81). Previous findings reveal that PTSD symptoms are moderately related to this cognitive factor (82,83). Although still in their beginning, the research findings indicate that the manifestations of this cognitive style in the form of biased information processing, as well as biased attention to threat and threat-related memories support its importance as a risk factor for PTSD development (84-88).

Stressor cumulation and traumatic experiences

In addition to the biological factors, the underlying assumption of the current Stressor-Dose Model is that the build-up of life-long disadvantages contributes to the emergence of a disorder. It also assumes that the greater intensity of a traumatic event will produce higher PTSD intensity (89). Previous multiple traumatic events, particularly violence in the form of attacks, represent the strongest risk factor for PTSD development in the general population (90), as well as in war veterans (91), raped women (92), and among those who developed PTSD in response to the attacks of September 11th (93). Although the literature is full of findings confirming the correlation of događaja s vjerojatnošću rizika od PTSP-a, veliki broj istraživanja ne podržava pretpostavku o senzitizaciji u odgovoru na traumatski stresor. Primjerice, na uzorku američkih studenata Falsetti i Resnick (94) nisu utvrdili razlike u pojavnosti PTSP-a i depresije s obzirom na to je li osoba bila žrtva jednog ili nekoliko kriminalnih događaja. Isti nalaz dobiven je u slučaju usporedbe uzorka kanadskih i američkih vatrogasaca (95). Međutim, kada su Wykes i Whittington (96) u napadnutih sestara s psihijatrijskog odjela utvrdili kako se uzorak dijeli na one koje su na stres odgovorile niskom ili visokom razinom distresa postavilo se pitanje adaptiraju li ili senzitiziraju li prijašnji stresori pojedinca u odgovoru na traumatski stresor? U slučaju medicinskih sestara s reakcijom niske razine distresa autori su interpretirali ovaj nalaz adaptacijom, odnosno razvojem kognitivnih i emocionalnih vještina zbog suočavanja sa sličnim iskustvima. Iz toga je slijedio zaključak kako će određene osobe razviti adaptivne odgovore na višestruke traumatske događaje, dok će se u drugih pojačati osjetljivost na traumatske stresore (96). Neki autori povlače analogiju biološkom procesu imunizacije organizma od nekih bolesti kao odgovora na male doze otrovnih tvari (cjepivo) (89). Točnije, smatraju kako pojedinac razvija adaptaciju i strategije savladavanja većih stresora kao odgovor na prijašnje iskustvo ponavljanih stresora manjih intenziteta (89). Konzistentno s ovim modelom 90 % sudionika u istraživanju Aldwina, Suttona i Lachmana (97) izvijestilo je kako je suočavanje sa stresnim događajima potpomognuto prijašnjim iskustvima suočavanja sa stresorima. Ta su iskustva rezultirala poticanjem razvoja samopouzdanja i nekih novih i adaptivnih strategija suočavanja (97).

Osim psiholoških faktora, biologija PTSP-a opsežno je proučavana u smislu genetskih i hormonskih faktora te psihofizioloških odgovora kao i mozgovne anatomije.

the number of traumatic events and the risk for developing PTSD, a large number of studies do not support the assumption of a sensitization in response to traumatic stressors. For example, on a sample of US students, Falsetti and Resnick (94) did not determine the differences in the PTSD emergence and depression as to whether a person was a victim of one or several criminal events. The same finding was obtained in the case of a comparison of Canadian and American firefighters (95). However, when Wykes and Whittington (96) observed a dual pattern when observing attacked nurses from the psychiatric department, the authors found that the nurses either belonged to a group of those who responded to stress with a low or high level of distress. In the case of nurses with low levels of experienced distress, the authors interpreted this finding as an adaptation by developing cognitive and emotional skills through coping with similar experiences. This was further followed by the conclusion that certain individuals would develop adaptive responses to multiple traumatic events, while others would increase susceptibility to traumatic stressors (96). Some authors draw the analogy to the biological process of immunization of the organism from some diseases as a response to small doses of toxic substances (e.g. vaccine) (89). More specifically, it’s assumed that the individual develops an adaptation and strategies for mastering major stressors in response to previous experiences of repeated stressors of lower intensity (89). Consistent with this model, 90% of participants in Aldwin, Sutton, and Lachman’s research (97) reported that facing stressful events was backed by previous experience of dealing with stressors. The same has resulted in encouraging self-confidence and some new and adaptive coping strategies in these individuals (97). In addition to psychological factors, PTSD biology has been extensively studied in terms of genetic and hormonal factors of these psycho-physiological responses as well as brain anatomy.

Biološki faktori

Prema biološkim teorijama, trauma oštećuje noradrenergički sustav pri čemu povišene koncentracije noradrenalina uzrokuju da se osoba lakše prestraši i snažnije izražava emocije nego što bi to inače bilo normalno što podržavaju i empirijski nalazi (98,99). Nadalje, jedna od specifičnosti ovog poremećaja je i kronično poremećena regulacija hipotalamo-pituitarno-adrenalne osi (HPA-os) za koju se čini kako zbog povišene razine kortikotropin-oslobađajućeg hormona postaje pojačano osjetljiva na stres i učinke kortizola (100,101). Također, čini se kako je promijenjena aktivnost triju moždanih struktura: prefrontalnog korteksa, hipokampusa te amigdala od posebnog značenja za istraživanja karakteristika ovog poremećaja (102,103). Naime, rezultati velikog broja studija slikovnih prikaza mozga kod PTSP-a začetak su modela limbičke senzibilizacije te smanjene kortikalne inhibicije kod PTSP-a uz specifičnu disfunkciju područja uključenih u pamćenje, emocije i vidno-prostornu obradu (104). U studijama koje su inducirale simptome PTSP-a traumatskim audiozapisima utvrđena je aktivacija desnog limbičkog i paralimbičkog sustava (105) i vidnog korteksa kao i smanjeni protok krvi u medijalnom prefrontalnom korteksu, hipokampusu i vidnom asocijativnom korteksu (104). Kod veterana s PTSP-om, kao odgovor na slikovne podražaje povezane s borbom, utvrđen je povećan protok krvi u jezgrama amigdala i prednjem cingularnom korteksu, a smanjen u Brockinom području (106). Ove nalaze autori dovode u vezu s neverbalnim emocionalnim vidnim predodžbama koje su dio ponovnog proživljavanja simptoma PTSP-a (106). Nadalje, izlaganje osoba s PTSP-om dovodi do smanjenja protoka krvi u medijalnom prefrontalnom korteksu, području odgovornom za regulaciju emocionalnog odgovora preko inhibicije amigdala (104). Dugi se niz godina smatralo kako zbog traume dolazi do oštećenja moždanih struktura (npr. smanje-

Biological factors

According to biological theories, trauma causes a noradrenergic system damage, with elevated levels of norepinephrine causing a person to become frightened more easily and to express emotions more intensively than would normally be supported by empirical findings (98,99). Furthermore, one of the specificities of this disorder appears to be the chronically disturbed regulation of the hypothalamic-pituitary-adrenal axis (HPA) that is more sensitive to stress and cortisol effects as a result of elevated levels of corticosteroid-releasing hormone (100,101). It also appears that the activity of three brain regions is altered in PTSD: the prefrontal cortex, the hippocampus, and the amygdala, which is of particular importance for the research of the manifestations of this disorder (102,103). Namely, the results of a large number of brain imaging studies in PTSD presented the foundation for the lymphatic sensitization model and the reduced cortical inhibition hypothesis in PTSD with specific dysfunctions of areas involved in memory, emotions, and visuo-spatial processing (104). In studies that induced PTSD symptoms with traumatic audio, the activation of the right lymphatic and paralimbic system (105) and visual cortex as well as reduced blood flow in the medial prefrontal cortex, hippocampus, and visual associative cortex (104) were determined. In PTSD veterans, in response to images of stress-related stimuli, increased blood flow was found in amygdala nuclei and the frontal cingulate cortex, while it was decreased in Brock's area (106). These findings were linked to unrealistic emotional visual concepts that are part of the re-experiencing symptoms of PTSD (106). Furthermore, exposure therapy of individuals with PTSD leads to a decrease in blood flow in the medial prefrontal cortex, the area responsible for regulating the emotional response through amygdala inhibition (104). For a number of years, it has been thought that trauma results ni volumen hipokampusa) koja se tada očituju i u funkcijskim deficitima verbalnog pamćenja (107). Određeno vrijeme postojala je i pretpostavka o značajnoj povezanosti između volumena hipokampusa i izraženosti posttraumatskih reakcija. Međutim, zaključak studije Gilbertsona i suradnika (108) u kojoj je proučavano 40 muških monozigotnih blizanaca različitih po izloženosti traumi u vijetnamskom ratu pokazala je nešto sasvim drugačije. Naime, traumi neizloženi, manji hipokampalni volumen bio je pretraumatski faktor rizika, umjesto da je njegov smanjeni volumen rezultat traumatskog događaja ili PTSP-a (108). Čini se kako sličan slijed prati i uočena pojačana aktivacija dorsalnog anteriornog cingularnog korteksa (dACK) u osoba s PTSP-om. Naime, studija blizanačkih potomaka osoba s PTSP-om pokazala je kako i prije izloženosti stresoru djeca ovih osoba pokazuju povišenu aktivaciju ove moždane regije važne za procesiranje emocionalnih sadržaja (109,110). Istraživanja također ukazuju kako predispoziciju za razvoj PTSP-a možemo potražiti i u premorbidnoj abnormalnoj strukturi i funkciji dACK-a (111,112), kao i u abnormalnoj povezanosti amigdala i dACK-a (113,114). Naposlijetku, Hendlerova i Admon (115) impliciraju kako je premorbidna osjetljivost na stres u osoba s PTSP-om potencijalno posredovana pretjeranom produkcijom emocije straha kao i disfunkcionalnom regulacijom straha u nastanku ovog poremećaja.

Što se genetskih istraživanja tiče, značajan utjecaj genetskih faktora utvrđen je u studijama monozigotnih i dizigotnih blizanaca te objašnjava gotovo 30 % varijance glavnih kategorija simptoma PTSP-a (116,117). Velika studija blizanaca veterana vijetnamskog rata utvrdila je kako 38 % genetske varijance doprinosi i paničnom poremećaju i PTSP-u, dok je dodatnih 14 % genetskog doprinosa bilo specifično za PTSP (118).

Glavna premisa istraživanja hormonskih utjecaja odnosila se na to da postoji vjerojatnost

in brain damage (e.g. decreased volume of the hippocampus), which is then manifested in functional deficits of verbal memory (107). For a certain time, there was also a presumption of significant correlation between the volume of the hippocampus and the expression of post-traumatic reactions. However, the conclusion of a study by Gilbertson and associates (108) in which 40 male monozygotic twins were studied against different Vietnam War traumas showed different results. Namely, trauma non-exposed, lower hippocampal volume was a pre-traumatic risk factor, rather than its reduced volume being the result of a traumatic event or PTSD (108). It seems that the same pattern can be observed in the increased activation of the dorsal anterior cingulate cortex (dACC) in PTSD individuals. Namely, the study of the twin descendants of people with PTSD has shown that prior to the stressor exposure, the children of these persons showed elevated activation of this cerebral region important for the processing of emotional content (109,110). Research also suggests that the predisposition to developing PTSD can be found in the premorbid abnormal structure and function of dACK (111,112), as well as in the abnormal communication between the amygdala and dACK (113,114). Ultimately, Hendler and Admon (115) imply that premorbid stress sensitivity in PTSD patients is potentially mediated by excessive fear production as well as dysfunctional regulation of fear in the onset of this disorder. As far as genetic research is concerned, significant influence of genetic factors has been established in monozygotic and dizygotic twin studies and explains nearly 30% of the major groups of PTSD symptoms (116,117). A large study of twin Vietnam veterans found that 38% of genetic variance contributed to panic disorder and PTSD, while an additional 14% of genetic contributions were specific to PTSD (118). The main premise of research on hormonal effects was that there is a likelihood that long-term stress hormone delivery causkako dugotrajno lučenje hormona stresa uzrokuje promjene u moždanoj fiziologiji pa čak i anatomiji mozga, odnosno pokušalo se utvrditi postoje li ikakve promjene takve vrste specifične za PTSP te jesu li faktor rizika ili su posljedica traumatskog događaja, odnosno poremećaja. Središnji element ovog pitanja činili su nalazi studija hipotalamo-pituitarno-adrenalne osi (HPA os) koja kontrolira lučenje hormona, posebice kortizola zbog suočavanja sa stresorima. Točnije, studije su se bavile utvrđivanjem oslabljivanja lučenja kortizola odnosno *otupljivanja* funkcije HPA osi zbog ponavljanog izlaganja traumatskim događajima. Naime, nekolicina studija utvrdila je kako su razine kortizola neposredno nakon traume niže u pojedinaca koji kasnije razvijaju PTSP (119,120). Nadalje, dok je razina kortizola bila povišena u osoba žrtvi prvog seksualnog napada, oslabljeno lučenje kortizola zamijećeno je u žrtava višestrukih seksualnih napada (121). Razine kortizola bile su manje u veterana s aktualnom dijagnozom PTSP-a od onih koji više nemaju tu dijagnozu (122). Iz toga je proizašao zaključak kako postoji mogućnost kako ponavljanje traume uzrokuje senzitizaciju na podražaje te pretjeranu aktivaciju sustava povezanih s tjelesnom pobuđenošću što dugoročno dovodi do iscrpljivanja sustava hormonskih odgovora. S druge strane, možda se radi o faktoru rizika koji se očituje u neadekvatnoj mogućnosti davanja hormonskog odgovora na traumu, budući da novije studije ovoga područja ukazuju kako nema povezanosti između razina kortizola i osoba s PTSP-om (123).

Istraživanja psihofizioloških obrazaca povezanih s PTSP-om utvrdila su kako su pojačani srčani puls, plašljive reakcije te generalizirane reakcije na podražaje s izostankom navikavanja česti korelati PTSP-a (124,125). Studija monozigotnih parova Orra i suradnika (126) pokazala je kako pojačani srčani puls u odgovoru na zastrašujući podražaj nije faktor rizika, već znak koji nastaje nakon razvoja PTSP-a. Istra-

es changes in brain physiology and even brain anatomy. That is, it was attempted to establish whether any changes of these patterns exist that are specific to PTSD and whether they are a risk factor or a consequence of a traumatic event. The central element of this question presented the findings of the HPA axis studies, in which the secretion of hormones due to stressors, particularly cortisol, is controlled. Specifically, the studies focused on the weakening of cortisol secretion or the HPA axis function numbing due to repeated exposure to traumatic events. Specifically, several studies have determined that cortisol levels immediately after trauma are lower in individuals who subsequently develop PTSD (119,120). Furthermore, while the cortisol level was elevated in victims of the first sexual assault, impaired cortisol elevation was observed in multiple sexual assault victims (121). Cortisol levels were lower in veterans with current PTSD diagnosis than those who no longer have this diagnosis (122). The authors came to the conclusion that there is a possibility that repeated trauma experiences cause sensitization to stimuli and excessive activation of the system associated with physical excitement which in the long run leads to the exhaustion of the hormonal response system. On the other hand, this may also present a risk factor that is reflected in the inadequate ability to provide a hormonal response to trauma since recent studies in this area suggest there is no correlation between cortisol levels and PTSD (123).

The research findings on PTSD-related psycho-physiological patterns showed that increased heart rate, startle reactions, and generalized reactions without habituation to stimuli often correlate with PTSD (124,125). The study of monozygotic twins of Orr and associates (126) showed that an increased heart rate in response to a fearful stimulus is not a risk factor, but a sign that arises after the development of PTSD. Research by Keane et al.

živanje Keanea i suradnika (127) pokazalo je pak kako trećina osoba s PTSP-om ne pokazuje nikakav specifičan obrazac psihofiziološkog odgovora na znakove traume, što je podržano i u nekim drugim studijama (128).

Iz cjelokupne istraživačke građe opisane unutar ovog poglavlja može se zaključiti kako međudjelovanje različitih faktora rizika pogoduje nastanku ovog poremećaja. Točnije, proizlazi iz interakcije različitih osobina ličnosti i strategija suočavanja pojedinca, psihijatrijske povijesti i komorbidnih stanja poput poremećaja ličnosti, vjerovanja i atribucija te bioloških faktora i socijalnih okolnosti. Međutim, usprkos faktorima njegova nastanka, činjenica je kako se ovaj poremećaj neće održati jednako dugo u različitih pojedinaca. Stoga je cilj sljedećeg odlomka pružiti uvid u raznolike faktore koje dosadašnji istraživački rad ističe važnima za produljeno trajanje, odnosno kronični tijek PTSP-a.

FAKTORI KRONIČNOGA TIJEKA POSTTRAUMATSKOG STRESNOG POREMEĆAJA

Tijek PTSP-a moduliran je i različitim psihološkim i socijalnim faktorima. Nadalje, studije biologije kroničnog tijeka PTSP-a impliciraju promjene u senzitivnosti HPA-osi, potencijalno oštećenje moždanih struktura povezanih s pamćenjem te obrazac pojačanog psihofiziološkog odgovora na stresore. Međutim, istraživači ovog područja nerijetko naglašavaju poteškoće određivanja radi li se o premorbidnim deficitima ili rezultatom perzistirajućih simptoma ovog poremećaja. Nadalje, ističu potrebu za većom količinom longitudinalnih istraživanja koja bi se u što adekvatnijoj mjeri pozabavila ovim problemom. Iako postoji relativno veliki broj studija tijeka PTSP-a u smislu prevalencije i kvantifikacije zastupljenosti ove dijagnoze u vremenskom tijeku, manji ih se broj istraživao, pogotovo longitudinalnim pristupom, povezanost različitih faktora s tijekom samog

(127) showed that a third of PTSD individuals show no specific pattern of psychophysical response to signs of trauma, which is also supported in some other studies (128). From the overall research material described in this chapter, one can conclude that the interaction of different risk factors favours the emergence of this disorder. Specifically, it stems from the interaction of different personality traits and coping strategies of an individual, psychiatric history and comorbid states such as personality disorders, beliefs, and attributions as well as biological factors and social circumstances. However, despite the factors of its origin, the fact is that this disorder will have a different course both in length and intensity in different individuals. Therefore, the aim of the next section is to provide an insight into various factors that the research has shown to be important for the prolonged duration or chronic course of PTSD.

FACTORS OF THE PTSD CHRONIC COURSE DEVELOPMENT

The chronic course of PTSD is modulated by various psychological and social factors. Furthermore, the studies on the biology of chronic PTSD imply changes in HPA axis sensitivity, potentially impaired functions of memory-related brain structures, and a pattern of enhanced psychophysical response to stressors. However, researchers in this area often emphasize the difficulty of differentiating between premorbid deficiencies and the results of persistence of PTSD symptoms. Furthermore, they emphasize the need for more longitudinal research that would address the problem more adequately. Although there is a relatively large number of PTSD chronic course studies in terms of prevalence and quantification of this diagnosis over time, only a small number of them have been investigating, especially by longitudinal approach, the association of varporemećaja. Sljedeći odlomak sadrži pregled dosadašnjih spoznaja o tijeku ovog poremećaja u podlozi različitih vrsta traumatskih stresora.

Faktori razvoja kroničnoga tijeka

Što se kroničnog tijeka tiče, učestalost simptoma PTSP-a varira od 1 % (129) do 46 % (130) u žrtava prometnih nesreća 3-12 mjeseci nakon nesreće. U studiji Korena i suradnika (131) utvrđeno je kako otprilike 30 % ozlijeđenih žrtava prometnih nesreća ima PTSP i godinu dana nakon nesreće.

Malo je studija koje su se sustavno bavile istraživanjem prirodnog tijeka PTSP-a i odrednicama kroničnog tijeka ovog poremećaja. Kronični PTSP često je registriran u žrtava silovanja, mučenja, političkog nasilja, u izbjeglica i u ratnih veterana (132,133). Nadalje, različita istraživanja, kao i različite vrste traumatskih stresora pružaju ponešto drugačije podatke o zastupljenosti ovog poremećaja tijekom vremena. Tako prospektivna studija na australskim vatrogascima pokazuje kako 29 mjeseci nakon sudjelovanja u velikom šumskom požaru 30 % i dalje zadovoljava kriterije za prisutnost poremećaja, dok 14 godina nakon velike poplave u Buffalu 28 % preživjelih i dalje nije postiglo remisiju (54,134). Nadalje, 19 godina nakon izloženosti ratnim bitkama 15 % vijetnamskih veterana još uvijek je imalo PTSP (54), dok je 10 % žrtava prometnih nesreća imalo PTSP i 3 godine nakon nezgode (131)**.** Općenito, što se tijeka ovog poremećaja tiče, istraživanja ukazuju multifaktorski model longitudinalnog tijeka ovog poremećaja s različitim ishodima u ovisnosti o mnogobrojnim pre-, peri- i posttraumatskim faktorima rizika poput kognitivnog stila, strategija suočavanja, socijalne potpore i mnogih drugih koji potencijalno određuju njegov kronični tijek.

Simptomi PTSP-a brže se povlače tijekom prve godine, a kasnije je povlačenje postupno (53). Kronicitet ovog poremećaja olakšan je faktorious factors with the disorder itself. The next section presents an overview of the current knowledge about the different types of traumatic stressors underlying the chronic course of this disorder.

The PTSD chronic course factors

As far as PTSD chronic course is concerned, the frequency of PTSD symptoms varies from 1% (129) to 46% (130) in car accident victims 3-12 months post-accident. The study of Koren et al. (131) showed that about 30% of injured victims of traffic accidents had PTSD one year after the event. There have been a few studies that have systematically investigated the chronic course of this disorder. Chronic PTSD is often registered in victims of rape, torture, political violence, refugees, and war veterans (132,133). Furthermore, different research, as well as various types of traumatic stressors, provide somewhat different information on the presence of this disorder over time. A prospective study on Australian firefighters showed that 29 months after participating in a large forest fire, 30% of participants still met the criteria for the presence of the disorder, while 14 years after the major flood in Buffalo, 28% of survivors still didn't achieve remission (134,54). Furthermore, 19 years after exposure to war combat, 15% of Vietnamese veterans still had PTSD (54), while 10% of victims of traffic accidents had PTSD even 3 years after the accident (131). Generally, concerning the course of this disorder, research suggests a multifactorial model of a longitudinal course of this disorder with different outcomes depending on many pre- and posttraumatic risk factors such as cognitive styles, coping strategies, social support, and many others potentially determining its chronic course. PTSD symptoms diminish faster during the first year and later retreat gradually (53). The chronicity of this disorder is facilitated by factors such as high intensity traumatic experiences (e.g. concenrima poput traumatskog iskustva visokog intenziteta (npr. koncentracijski logori), otprije postojećim anksioznim poremećajima i poremećajima raspoloženja, socijalnim otuđenjem, većim brojem prvotnih simptoma PTSP-a, ženskim rodom, pojačanom otupjelošću ili pobuđenošću kao reakcijom na stresor te komorbidnim zdravstvenim bolestima (27). Perkonigg i suradnici (129) u svojoj prospektivnoj longitudinalnoj studiji zajednice pokušali su utvrditi po čemu se skupine potpune remisije razlikuju od skupine kod koje je zabilježen kronični tijek PTSP-a. Utvrdili su kako je iskustvo novog traumatskog događaja u razdoblju između dva mjerenja najviše razlikovalo ove dvije skupine. Nadalje, kada su iz uzorka izuzete ove retraumatizirane osobe, prediktorima kroniciteta pokazali su se veći broj izbjegavajućih ponašanja te simptoma PTSP-a te manja stopa percipirane samokompetentnosti i traženja pomoći u slučaju kronične slike PTSP-a. Kronični je tijek također povezan s neposrednom akutnom reakcijom na stres, primjerice u obliku pojačane psihomotorne napetosti (136). U studiji Davisona i suradnika (132) kronični PTSP bio je povezan sa smanjenom socijalnom podrškom, većom zastupljenošću simptoma socijalne fobije kao i većom stopom izbjegavajućih ponašanja. Zlotnick i suradnici (137) izvještavaju kako su trauma u odrasloj dobi kao i alkoholizam također povezani s nižim stopama remisije. Veliki broj studija kroničnog tijeka PTSP-a usredotočio se na istraživanja različitih kognitivnih faktora u podlozi izostanka remisije ovog poremećaja iz kojih je proizašla i kognitivna teorija kroničnog tijeka PTSP-a.

Kognitivni mehanizmi i obrada informacija

Perzistiranje simptoma PTSP-a u podskupini osoba koje su preživjele traumu objašnjava se putem čimbenika poput nepotpune emocionalne obrade (138) i disfunkcijske obrade informacija traumatskih sjećanja (139). Na-

tration camps), pre-existing anxiety disorders and mood disorders, social alienation, multiple initial symptoms of PTSD, female genital mutilation, increased numbness or excitement as a stressor response, and comorbid health illnesses (27). The prospective longitudinal community study of Perkonigg et al. (129) attempted to determine distinguished the groups that achieved complete remission from the groups that had a chronic PTSD. They found that the experience of a new traumatic event in the period between the two measurements contributed the most to explaining the differences between these two groups. Furthermore, when these retraumatised individuals were excluded from the sample, predictors of chronicity became a greater number of avoidance behaviours and PTSD symptoms, and a lower rate of perceived self-competency and seeking assistance in individuals with chronic PTSD. The chronic course is also associated with an immediate acute stress response, for example in the form of increased psychomotor tension (136). In the study of Davison et al., (132) chronic PTSD was associated with reduced social support, greater manifestation of the symptoms of social phobia, and higher rates of avoidance behaviour. Zlotnick et al. (137) reported that adult traumas and alcoholism are also associated with lower remission rates. A great number of chronic PTSD studies have focused on the research of various cognitive factors that prevented remission of its symptoms. The findings from these studies presented later a basis for the cognitive theory of PTSD.

Cognitive mechanisms and information processing

The persistence of PTSD symptoms in the subgroup of traumatic-event survivors is explained by factors such as incomplete processing of emotional stimuli (138) and dysfunctional processing of traumatic memory information (139). Furthermore, Rachman (138) completes dalje, Rachman (138) nadopunjava koncept emocijske obrade naglašavajući važnost kognitivnih mehanizama u emocijskoj obradi. Ovaj obnovljeni fokus na individualne razlike u procjeni i sjećanja na traumu potencijalno pomaže objasniti suprotstavljene nalaze ranijih istraživanja o ulogama akutnih intruzija i simptoma izbjegavanja kao prediktora PTSP-a (139). Naime, simptomi akutnih intruzija povezivani su s uspješnim oporavkom od traume, jer su intruzije bile viđene pokazateljima emocionalne obrade (140), dok su druge studije otkrile kako su visoke razine akutnih intruzija prediktori slabijeg oporavka (142). Čini se da kognitivna teorija nudi moguće rješenje ovih naizgled proturječnih nalaza upućujući na to da simptomi PTSP-a perzistiraju kada pojedinci procesiraju traumu na način da dovodi do osjećaja intenzivne i neposredne prijetnje (143). Taj osjećaj prijetnje uvelike je potaknut negativnim procjenama i slabijom razradom i kontekstualizacijom kognitivne reprezentacije traume (143). Promjene u negativnim procjenama i sjećanjima na traumu obično su spriječene zbog nastojanja pojedinca da primijeni niz zaštitnih mehanizama i procesa kako bi se izbjegli bilo kakvi podsjetnici na traumatski događaj (142). Perzistentno visoke razine izbjegavajućih simptoma obično se zamjećuju kod nekih traumatiziranih pojedinaca tijekom vremena (144) te mogu ukazivati na smanjenu sposobnost asimilacije i potpune emocionalne obrade traumatskog događaja (138).

Atribucijski stilovi

Druga vrsta kognitivnih faktora koja doprinosi objašnjavanju kroničnog tijeka PTSP-a proizlazi iz istraživanja atribucijskih stilova i lokusa kontrole traumatiziranih osoba. Točnije, mnogo dokaza pokazuje da prihvaćanje vlastite krivnje (povezano vjerovanjima u unutarnji lokus kontrole) smanjuje rizik za nastanak PTSP-a. Prihvaćanje „umjerene krivnje“ povezano je s najznačajnijim poboljšanjem zbog

the concept of emotional processing by emphasizing the importance of cognitive mechanisms in processing emotional information. This renewed focus on individual differences in appraisals and trauma memories potentially helps in explaining the controversial findings of earlier research on the role of acute intrusions and avoidance symptoms as PTSD predictors (139). Namely, the symptoms of acute intrusions were linked to successful trauma recovery because intrusions were seen as indicators of emotional processing (140), while other studies found that high levels of acute intrusions predicted poorer recovery (142). Cognitive theory seems to offer a possible solution to these seemingly contradictory findings suggesting that PTSD symptoms persist when individuals process trauma in a way that leads to a sense of intense and immediate threat (143). This sense of threat is greatly stimulated by an individual's negative appraisals and the weaker elaboration and contextualization of traumatic cognitive representations (143). Changes in negative appraisals and memories of trauma are usually prevented by the effort of an individual to apply a series of protective mechanisms and processes to avoid any reminders of a traumatic event (142). Persistent high levels of avoidance symptoms are commonly observed in some traumatized individuals over time (144) and may indicate reduced ability to assimilate and complete emotional treatment of a traumatic event (138).

Attributional styles

Another type of cognitive factor that contributes to the explanation of chronic PTSD arises as a result of the research on attributional styles and locus of control of traumatized individuals. Specifically, ample evidence suggests that accepting one's own guilt (linked to beliefs in the internal locus of control) reduces the risk of PTSD. Acceptance of "moderate guilt" is associated with the most significant improvement liječenja 225 veterana s PTSP-om (145). Među osobama praćenima 6 i 12 mjeseci nakon teške prometne nesreće, oni koji i dalje pokazuju simptome PTSP-a bili su oni koji su pripisivali više od polovice krivnje drugima (146). Slični rezultati dobiveni su u drugom uzorku u kojem je samookrivljavanje bilo povezano s manjim intenzitetom prvotnih simptoma i bržim oporavkom (147). Izvanjska atribucija krivnje nakon teške ozljede glave također je povezana s većom težinom simptoma PTSP-a u opsežnoj Studiji zajednice Velike Britanije (*Great Britain Community Survey*) (148). Međutim, nalazi daljnjih istraživanja ukazivali su na kompeksniji odgovor na pitanje je li samookrivljavanje ili vanjska atribucija krivnje veći rizik za razvoj PTSP-a ostavljajući otvorenom mogućnost da su ta uvjerenja u interakciji s vrstom traumatskog događaja. Kada su pojedinci s internalnim lokusom kontrole suočeni s osobito teškim ishodima, njihovo je blagostanje značajnije narušeno (149). Nadalje, u slučaju PTSP-a nastalog u odgovoru na traumatsko iskustvo silovanja, samookrivljavanje, olakšano negativnim stavovima socijalne okoline, povezano je s kroničnim tijekom ovog poremećaja te dužim oporavkom (150,151). Pesimističan atribucijski stil, koji se očituje stabilnom i globalnom unutarnjom atribucijom uzroka za negativne događaje, povezan je s depresijom (152). Ovakav je stil također bio povezan s PTSP-om u veterana (153) te u adolescenata nakon katastrofa (154). Validacijska studija inventara posttraumatskih kognicija utvrdila je samookrivljavanje jednim od tri faktora koji uspješno identificiraju PTSP, zajedno s negativnim mislima o sebi i svijetu (155). Veći intenzitet simptoma PTSP-a tipičan za žene potencijalna je posljedica povećanog samookrivljavanja (156). Na osnovi svih ovih nalaza istraživači su predložili potencijalno objašnjenje suprotstavljenih nalaza o pripisivanju odgovornosti i PTSP-a. Moguće je da uvjerenja o unutarnjem lokusu kontrole, učinkovita u širokom rasponu situacija u normalnim uvjetima, funkcioniraju drugačije

due to the treatment in 225 veterans with PTSD (145). Among those observed 6 and 12 months after a severe traffic accident, those who still exhibit PTSD symptoms were those who attributed more than half of the blame to others (146). Similar results were obtained in another sample in which self-blame was associated with lower intensity of initial symptoms and faster recovery (147). Excess attribution of guilt after severe head injury is also associated with more severe PTSD symptoms in the Great Britain Community Survey (148). However, further research has suggested a more rational answer to the question whether self-blame or external attribution of guilt poses a higher risk for PTSD development, leaving an open chance for these beliefs to interact with the type of traumatic event. When individuals with internal locus of control are faced with particularly difficult outcomes, their welfare is significantly impaired (149). Furthermore, in the case of PTSD resulting from traumatic rape experience, self-blame, facilitated by negative attitudes of the social environment, is associated with a chronic course of this disorder and longer recovery (150,151). The pessimistic attributional style, which is manifested as a stable and global internal attribution of causes for adverse events, is associated with depression (152). This style was also associated with PTSD in veterans (153) and adolescents after disasters (154). The validation study of The Posttraumatic Cognition Inventory has determined self-blame as one of three factors that successfully identify PTSD, along with negative thoughts about oneself and the world (155). The increased intensity of PTSD symptoms typical for the female gender is a potential consequence of increased self-blame (156). Based on all of these findings, researchers have suggested a potential explanation of various conflicting findings regarding attributional styles and PTSD. It is possible that beliefs about the internal locus of control, effective in a wide range of situations under normal conditions, work differently under extreme conditions. It is possible that in their core lies a u ekstremnim uvjetima. U podlozi njih možda leži globalna osobina koja je sposobnost pojedinca da prepozna uvjete pod kojima je unutarnja atribucija odgovornosti prikladna, i one u kojima nije. Janoff-Bulman (157) smatra da su pojedinci u najvećem riziku od poremećaja vezanih uz traumu oni čija su uobičajena uvjerenja i pretpostavke o sebi ili svijetu „razdrmana" traumatskim događajem. Ova pretpostavka ukazuje da krhkost uvjerenja može biti dublji faktor rizika te postoje neki empirijski dokazi koji to i podržavaju. Među žrtvama silovanja, napadi u percipiranom sigurnom okruženju doveli su do težih simptoma PTSP-a od napada u procijenjenim opasnim okruženjima (158). Prema Bowmanu i Yehudi (89), na neki način, čini se da je razbijanje vjerovanja u sigurnost okruženja dodatni faktor rizika za PTSP. Čini se kako vjerovanja o pravednosti svijeta, osobnoj učinkovitosti i sigurnosti te unutarnjem lokusu kontrole, funkcioniraju kao faktori rizika kada ih se osoba rigidno pridržava unatoč događaju koji snažno ukazuje na suprotno. Isto tako, fleksibilnije prihvaćanje ideje da neki događaji nisu u skladu s vjerovanjima jedna je od strategija koja potencijalno pruža zaštitu kada je osoba suočena s traumom visokog intenziteta. Moguće je kako je rigidnost samog vjerovanja, više nego bilo koje specifično vjerovanje, najvažniji kognitivni faktor rizika za razvoj kroničnog PTSP-a (89).

Samoefikasnost

Osim vjerovanja i pripisivanja uzročnosti percipirana samoefikasnost konstrukt je koji se pokazao povezanim sa simptomima PTSP-a. Ovaj se konstrukt odnosi na vjerovanja u vlastite sposobnosti organizacije i izvršavanja slijeda radnji potrebnih za izvršenje nekog zadatka ili aktivnosti. Istraživanje Ginzburga i suradnika (159) pokazalo je kako veterani s kroničnim PTSP-om pokazuju značajno manji stupanj percipirane samoefikasnosti od odlikovanih veterana koji nisu razvili poremećaj.

global feature that represents the ability of an individual to recognize the conditions under which the internal attribution of responsibility is appropriate, and those in which it is not. Janoff-Bulman (157) suggests that individuals at the greatest risk of traumatic disorders are those whose common beliefs and assumptions about themselves or the world are "disrupted" by a traumatic event. This assumption suggests that the fragility of one's belief can be a deeper risk factor and there is some empirical evidence to support this. Among rape victims, attacks in a perceived safe environment led to more severe PTSD symptoms than attacks in estimated dangerous environments (158). According to Bowman and Yehuda (89), in some ways, breaking the belief in the safety of one's environment is an additional risk factor for PTSD. It seems that beliefs about the fairness of the world, personal efficacy and safety, and the internal locus of control, work as risk factors when a person is rigidly adhered to them, despite an event that strongly suggests the opposite. Likewise, the more flexible acceptance of the idea that some events are not consistent with one's beliefs is one of the strategies that potentially provide protection when a person faces a high-intensity trauma. It is possible that the rigidity of the belief, more than any specific belief itself, is the most important cognitive risk factor for the development of chronic PTSD (89).

Self-efficacy

In addition to an individual's beliefs and attributions of causality, perceived self-efficacy presents a construct that appears to be associated with the symptoms of chronic PTSD. This construct relates to beliefs in one's own organizational abilities and the execution of the sequence of actions required to carry out a task or activity. The research of Ginzburg and associates (159) showed that veterans with chronic PTSD showed a significantly lower degree of self-efficacy than veterans who received war medals and

Ovi su ispitanici pokazivali manju tendenciju od odlikovanih suboraca da pripišu neuspjeh i uspjeh unutranjim faktorima te veću tendenciju pripisivanja neuspjeha nekontrolabilnim i stabilnim faktorima, što je konzistentno s prethodnim istraživanjima (160,161). Kronični PTSP bio je povezan s lošijim funkcioniranjem na bojištu pri čemu autori ponovo naglašavaju problematiku uzročno-posljedične povezanosti pri interpretaciji ovih nalaza (159). Veterani s kroničnim PTSP-om su također imali slabiji stupanj obrazovanja od suboraca bez PTSP-a te odlikovanih suboraca. Autori ukazuju na mogućnost kako obrazovanje pomaže razvoju osobina važnih za suočavanje i prilagodbu poput osjećaja koherentnosti i samopouzdanja koji su se pokazali povezani s obrazovanjem i sposobnostima prilagodbe (160,161). Faktor dodatnih komplikacija pri oporavku od PTSP-a čini i nerijetka istovremena pojavnost i drugih psihijatrijskih dijagnoza u pojedinca s ovim poremećajem, o čemu će biti govora u idućem odlomku.

Komorbiditet kao faktor održavanja kroničnoga tijeka PTSP-a

Nekoliko je studija utvrdilo kako je klinička depresija jedan od faktora koji imaju utjecaj na tijek i liječenje PTSP-a (164). Bryant i suradnici (165) utvrdili su, primjerice, kako su osobe s PTSP-om koje su vremenom odustale od KBT-a imale izraženije simptome depresije od osoba koje su tretman privele kraju. Slične nalaze utvrdili su i McDonagh i sur. (166), no i Stein, Dickstein, Schuster, Litz i Resnick (167) koji su utvrdili i višu početnu razinu autonomne pobuđenosti u osoba s PTSP-om koje nisu pokazivale poboljšanje stanja zbog KBT tretmana. Međutim, samo pitanje komorbiditeta i tijeka oporavka od PTSP-a očito zahtijeva podrobniju istraživačku provjeru. Na potonje upućuju nalazi istraživanja koja nisu utvrdila značajne veze između simptoma velikog depresivnog po-

did not develop the disorder. These respondents showed a lesser tendency to attribute either failure or success to internal factors and a greater tendency to attribute failure to non-controllable and stable factors than participants without PTSD, consistent with previous research (160,161). Chronic PTSD was associated with inferior functioning on the battlefield, where authors again emphasize the cause-and-effect relationship in the interpretation of these findings (159). Veterans with chronic PTSD also had a lower level of education from non-PTSD veterans and veterans who received war medals. The authors suggest the possibility that education helps to develop features that are important for coping and adaptation, such as feelings of coherence and self-confidence that have shown to be related to education and adaptation skills (160,161). The simultaneous occurrence of other psychiatric diagnoses in individuals with this disorder presents another factor of potential additional complications in PTSP recovery, which will be discussed in the next section.

Comorbidity as a factor for maintenance of chronic PTSD

Several studies have established that clinical depression is one of the factors influencing the course and the treatment of PTSD (164). Bryant et al. (165) found, for example, that persons with PTSD who eventually dropped out of CBT had more pronounced symptoms of depression than the treatment recipients who endured the therapy to the planned end. Similar findings have been found by McDonagh et al. (166), however, Stein, Dickstein, Schuster, Litz, and Resnick (167) also found a higher initial autonomic arousal levels in PTSD patients who did not show improvement post-CBT. The issue of comorbidity and the recovery process from PTSD obviously requires more detailed research. The latter is indicated by research findings that have not established significant links between the symptoms of major depressive disorder and the course of PTSD remećaja i tijeka PTSP-a (168-170). Istraživanje Gillespiea i suradnika (171) utvrdilo je kako depresija, alkoholizam te panični poremećaj nisu povezani s manje uspješnim ishodima liječenja osoba s PTSP-om. Međutim, stanje osoba s komorbidnim smetnjama zahtijevalo je veći broj susreta u okviru terapije za postizanje sličnoga uspjeha kao s osobama bez komorbidnih smetnji. Na osnovi opisanoga, očiglednom se ističe potreba za temeljitijim istraživanjima ovog područja, posebice za nacrtima koji bi utvrđivali medijatore odnosa između komorbiditeta i terapijskog napretka u osoba s PTSP-om.

Socijalna podrška

Jedan od faktora koji je također istraživan u kontekstu tijeka oporavka od PTSP-a je i uloga različitih aspekata socijalne podrške. Istraživanje Klarića i suradnika (172) na uzorku traumatiziranih mostarskih žena pokazalo je kako je percipirana socijalna podrška prijatelja i radnih kolega niža nego u kontrolnog uzorka. Ova vrsta socijalne podrške pokazala se jačim zaštitnim faktorom za sve razine intenziteta simptoma PTSP-a, jačim čak i od obiteljske podrške. Percipirane niske razine prijateljske podrške pokazale su se jedinim značajnim prediktorom simptoma PTSP-a (172). Andrews i suradnici (173) istraživali su rodne razlike u različitim aspektima percipirane socijalne pomoći na uzorku u muškaraca i žena žrtava nasilnog napada. Iako su pripadnici oba roda mjesec dana nakon traume izvještavali o jednakim stupnjevima pozitivne podrške i zadovoljstva, žene su izvijestile o višim razinama negativnih reakcija od obitelji i prijatelja koje su bile medijator povezanosti roda i simptoma PTSP-a 6 mjeseci nakon napada. Socijalna podrška pri povratku s rata i aktualna socijalna podrška pokazali su se faktorima zaštite i/ili ublažavanja simptoma kroničnog PTSP-a dok ostala istraživanja ukazuju na ulogu socijalne podrške kao zaštitnog faktora u prevenciji nastanka PTSP ili ublažavanju postojećih simptoma (174,175). Naposli-

(168-170). Research by Gillespie et al. (171) found that depression, alcoholism, and panic disorder were not associated with less successful outcome of PTSD treatment. However, the condition of people with comorbid dysfunction required a greater number of treatments within a therapy to achieve similar success as in individuals without comorbid disorders. Based on the above, the need for more thorough research in this area is evident, especially for designs that would determine mediators of the relationship between comorbidity and therapeutic progress in individuals with PTSD.

Social support

One of the factors that has also been explored in the context of the PTSD recovery process is the role of various aspects of social support. The research of Klarić and his associates (172) on a sample of traumatized Bosnian women from the city of Mostar showed that these women perceived lower levels of social support by friends and work colleagues than the comparison group. This type of social support has been shown to be a stronger protective factor for all levels of PTSD symptom intensities, even stronger than family support. Perceived low levels of support from friends have proved to be the only significant predictor of PTSD symptoms (172). Andrews et al. (173) investigated gender differences in different aspects of perceived social support on a sample of male and female victims of violent assaults. Although members of both genders reported a degree of positive support and social support satisfaction after the trauma, women reported higher levels of negative reactions from family and friends that mediated gender related PTSD symptoms 6 months after the attacks. Social support after the return from war and current social support have been shown to act as protective or mitigating factors of chronic PTSD symptoms while other studies point to the role of social support as a protective factor in the prevention of PTSD or the alleviation of jetku, negativna usmjerenost socijalnoj mreži (engl. *negative network orientation*) definirana negativnim stavovima i očekivanjima pojedinca o koristi socijalne podrške u suočavanju sa stresom, povezana je s intenzitetom simptoma PTSP te je u negativnoj povezanosti s percipiranom socijalnom podrškom (176).

Faktori socioekonomskog statusa

Na kraju, zanimljivo, još nedovoljno istraženo područje u kontekstu trajanja simptoma PTSP-a, su istraživanja uloge socioekonomskog statusa traumatizirane osobe. Točnije, uloge parničenja i traženja odštete u učvršćivanju simptoma PTSP-a, pa čak i njegovog kroničnog oblika. Naime, stupanj u kojem na kronični PTSP utječe parničenje još je uvijek predmet rasprava u literaturi. Tradicionalni pogled, koji se očituje i u Millerovom pojmu „neuroza nezgode“ (131), ukazuje na ulogu motivacije i ponavljanja traumatskog iskustva za sudske sporove u formiranju PTSP-a. Ipak, nedavne studije koje su ispitivale ovu hipotezu daju oprečne rezultate. Dok su neki otkrili vezu između parnice i PTSP-a (177,178) drugi nisu potvrdili takav odnos (16) kao ni između nagodbe i naknade i oporavka (179).

Kao što je spomenuto u uvodu, tri su osnovne hipoteze koje se odnose na opažene razlike u izraženosti simptoma PTSP-a u osoba koje traže financijsku dobit od onih koji ju ne traže. Jedna od hipoteza odnosi se na pretpostavku o stvarnom *stvarne narušenosti funkcioniranja* (*disability hypothesis*). Druga hipoteza je pretpostavka *traženja financijske dobiti* (*finantial gain hypothesis*). Kao što ime predlaže ova hipoteza se odnosi na pretpostavku kako osobe s ovim poremećajem pretjeruju prigodom iskaza o svojim simptomima kako bi maksimizirali financijsku dobit. Ova je hipoteza najviše istraživana pri čemu većina istraživanja upućuje kako petina sudionika obično pokazuje profile na dijagnostičkoj ljestvici MMPI-2 koji ukazuju na

existing symptoms (174,175). In the end, negative network orientation, defined through negative attitudes and expectations of the individual on the benefits of social support in dealing with stress, is associated with higher intensities of PTSD symptoms and is negatively associated with perceived social support (176).

Factors of socioeconomic status

Finally, an interesting, still insufficiently explored area in the context of the duration of PTSD symptoms, refers to the role of socioeconomic status of a traumatized person. Specifically, the role of litigation and compensation seeking in alleviating the symptoms of PTSD and even its chronic forms. Namely, the degree to which chronic PTSD is affected by litigation is still a subject of discussion in literature. The traditional view, also expressed in Miller's concept of “accident neurosis” (131), suggests the role of motivation and repetition of traumatic experience during court disputes in the formation of PTSD, although recent studies that have been examining this hypothesis give contradictory results. The relationship between litigation and PTSD (177,178) did not confirm such a relationship (16) nor the relation between settlement and compensation and PTSD recovery (179). As mentioned in the introduction, there are three basic hypotheses that relate to the observed differences in the expression of PTSD symptoms in people seeking financial gain from those who do not seek it. The first hypothesis refers to the assumption of the presence of actual disability in individuals with PTSD (disability hypothesis). The second refers to the assumption of one's financial gain (financial gain hypothesis). As the name suggests, this hypothesis refers to the assumption that people with this disorder exaggerate when they report their symptoms to maximize their financial gain. This hypothesis is the most explored one, with most studies suggesting that a fifth of the participants usually show profiles on the ekstremne rezultate na kontrolnim ljestvicama koje ukazuju na pretjerivanje u opisu izraženosti simptoma (22). Posljednja pretpostavka odnosi se na *hipotezu pojačanoga stresa* (*the stress hypothesis*). Navedena pretpostavka odnosi se na pojačavanje simptoma PTSP-a kako je pojedinac prisiljen ponovo proživljavati različite aspekte traumatskog iskustva prolazeći kroz postupke parničenja. Posljednja hipoteza nije znanstveno nikada direktno istražena, no zasada postoje indirektni istraživački nalazi koji impliciraju njezinu utemeljenost (180). Zanimljivi su i nalazi istraživanja koji ukazuju kako financijska dobit nije jedini razlog traženja kompenzacije. Za osobe s PTSP-om spomenuto predstavlja i određenu simboliku koja se odnosi na priznanje vezano uz proživljenu patnju kao i odrješenje od doživljaja krivnje posebno vezano uz žrtve seksualnog nasilja. Također, utvrđeno je kako je visina pojedinčevih prihoda često povezana s doživljajem manjeg značenja same financijske dobiti koja je rezultat parničenja i obrnuto (181).

Temeljitiji nacrti ispitivanja ovog važnog faktora rizika za kroničan tijek ovoga poremećaja svakako su nužni u budućnosti.

ZAKLJUČAK

PTSP je poremećaj čiji je nastanak uvjetovan kompleksnom interakcijom bioloških, psiholoških te socijalnih faktora koji određuju reakciju pojedinca. Dosadašnja istraživanja izdvojila su različite faktore rizika koji pogoduju nastanku ovog poremećaja, a proizlaze iz interakcije različitih osobina ličnosti i strategija suočavanja pojedinca, psihijatrijske povijesti i komorbidnih stanja poput poremećaja ličnosti, vjerovanja i atribucija te bioloških faktora i socijalnih okolnosti. Iako su ova istraživanja opterećena problematikom uzročno-posljedične povezanosti, čini se kako se ipak u nastanku PTSP-a značajnima ističu osobine poput neuroticizma te genetskih nasljednih faktora, prethodna po-

MMPI-2 diagnostic scale that have extreme results on control scales that indicate an exaggeration in the description of symptoms expression (22). The last assumption refers to the stress hypothesis. The aforesaid assumption refers to the increase of the symptoms of PTSD as an individual is forced to re-experience different aspects of a traumatic experience through litigation procedures. The last hypothesis has never been directly researched empirically, but there are indirect research findings that imply its assumptions (180). Interestingly, there are also research findings that indicate that financial gain is not the only reason for seeking compensation. For individuals with PTSD, seeking compensation also presents a certain symbol of acknowledgment regarding the suffering experienced as well as the omission of guilt - especially related to the victims of sexual violence. It has also been found that an individual's income is often negatively associated with estimations of the significance of potential financial gain from litigation and vice versa (181). Further research with more elaborate designs of this important risk factor for the chronic course of PTSD is necessary in the future.

CONCLUSION

PTSD is a result of a complex interaction of biological, psychological and social factors that determine an individual's response. Present research has identified a variety of risk factors that favour the emergence of this disorder, resulting from the interaction of different personality traits and coping strategies of an individual, psychiatric history and comorbid states such as personality disorders, beliefs and attributions as well as biological factors and social circumstances. Although these studies do not provide an answer to the issue of causality, it seems that the emergence of PTSP is significantly alleviated by specific features such as neuroticism and genetic heritability factors, the previous history of anxvijest anksioznih poremećaja, odnosno osobine poput povišene anksioznosti kao osobine ličnosti te posebice anksiozna osjetljivost. Značajnima su se posebno pokazali kognitivni faktori poput procjene događaja kao ugrožavajućeg; vjerovanja o osobnoj ranjivosti; pokušaja pripisivanja posebnog značenja događaju te vjerovanja o količini osobne kontrole, a potencijalno i kognitivni stil strepnje. Čini se kako faktori rizika također proizlaze i iz stupnja intelektualnih sposobnosti pojedinca, razine socijalne podrške kao i iz višestrukih iskustava traume za koje postoji pretpostavka kako putem senzitizacije HPA-osi djeluju na smanjenje adaptivne spremnosti odgovora na stresor.

Što se kroničnog tijeka PTSP-a tiče čini se kako stupanj trajanja simptoma varira s obzirom na vrstu traumatskog stresora te je uvjetovan interakcijom višestrukih faktora poput kognitivnog stila, strategija suočavanja, socijalne potpore i mnogih drugih koji potencijalno određuju njegov kronični tijek. Ponovna traumatizacija te intenzitet prvotnog odgovora na traumu prediktori su kroničnog tijeka. Način na koji pojedinac procesira traumu (osjećaj intenzivne i neposredne prijetnje te izbjegavanje) te rigidnost vjerovanja uzdrmanog traumom, više nego bilo koje specifično vjerovanje o sebi, svijetu i okolini, predstavlja istaknuti kognitivni faktor rizika za razvoj kroničnoga tijeka PTSP-a. Naposlijetku, socijalna podrška, pogotovo ona negativna u slučaju ženskoga roda, pokazala se faktorom rizika kroničnoga tijeka ovog poremećaja.

Iako se naizgled radi o veoma temeljito istraženom području, daljnja istraživanja, pogotovo ona longitudinalne prirode nužna su kako bi se u što boljoj mjeri razumjeli faktori u podlozi nastanka i kroniciteta ovog poremećaja. Također, čini se kako je potrebno podrobnije istražiti doprinos procesa parničenja, rentnih faktora te društveno-ekonomskih okolnosti u kontekstu formiranja identiteta *traumatiziranoga* te održavanja ovoga poremećaja.

iety disorders, or features such as elevated trait anxiety and particularly anxiety sensitivity. Special contributors to the development of this disorder appear to be cognitive factors. The latter refer to the assessment of an event as a threatening one; beliefs about personal vulnerability; attempts to attribute special significance to the beliefs about the amount of personal control and potentially – the looming cognitive style. It also appears that risk factors arise from the degree of an individual's intellectual abilities, the level of social support, as well as from multiple trauma experiences, for which there is a hypothesis that HPA-axis sensitization acts to reduce adaptive responsiveness to the stressor. As far as the chronic course of PTSD is concerned, it seems that the duration of the symptoms varies with regard to the type of a traumatic stressor experienced. The PTSD chronic course also appears to be conditioned by the interaction of multiple factors such as cognitive styles, coping strategies, social support, and many others that potentially determine its chronic course. Re-traumatization and the intensity of the first response to trauma are also predictors of the chronic course. The way in which an individual processes trauma (intense and immediate threats and avoidance) and the rigidity of traumatic beliefs, more than any specific beliefs about oneself, the world and the environment, is a prominent cognitive risk factor for the development of chronic PTSD. Ultimately, social support, especially negative in the case of the female gender, has been shown to be the risk factor of the chronic course of this disorder. Although this area of research appears to be thoroughly explored, further research, especially of longitudinal quality, is necessary to better understand the underlying factors of the development and chronicity of this disorder. Also, it seems more necessary to explore the contribution of the process of litigation, compensation seeking factors and socio-economic circumstances in the context of *the traumatized* identity formation and maintenance of this disorder.

LITERATURA / *REFERENCES*

1. Wooley CF. Jacob Mendez DaCosta: medical teacher, clinician, and clinical investigator. Am J Cardiol 1982; 50: 1145-8.
2. World Health Organization. The ICD-11 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines. Geneva: World Health Organization, 2018. https://icd.who.int/
3. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author, 2013.
4. Edmondson D. An Enduring Somatic Threat Model of Posttraumatic Stress Disorder Due to Acute Life-Threatening Medical Events. Soc Pers Psychol Comp 2014; 8: 118-34.
5. Wikman A, Bhattacharyya M, Perkins-Porras L, Steptoe A. Persistence of posttraumatic stress symptoms 12 and 36 months after acute coronary syndrome. Psychosom Med 2008; 70: 764-72.
6. Ginzburg K, Ein-Dor T. Posttraumatic stress syndromes and health-related quality of life following myocardial infarction: 8-year follow-up. Gen Hosp Psychol 2011K; 33: 565-71.
7. Matsuoka Y, Nakano T, Inagaki M, Sugawara Y, Akechi T, Imoto S i sur. Cancer-related intrusive thoughts as an indicator of poor psychological adjustment at 3 or more years after breast surgery: a preliminary study. Breast Canc Res Treat 2002; 76: 117-24.
8. Mehnert A, Berg P, Henrich G, Herschbach P. Fear of cancer progression and cancer-related intrusive cognitions in breast cancer survivors. Psycho-Oncol 2009; 18: 1273-80.
9. Mahmoodi Z, Dolatian M, Shaban Z, Shams J, Alavi-Majd H, Mirabzadeh A. Correlation between Kind of Delivery and Posttraumatic Stress Disorder. Ann Med Health Sci Res 2016; 6: 356-61. doi:10.4103/amhsr.amhsr_397_15.
10. Garthus-Niegel S, von Soest T, Vollrath ME, Eberhard-Gran M. The impact of subjective birth experiences on post-traumatic stress symptoms: A longitudinal study. Arch Womens Ment Health 2013; 16: 1-10.
11. Andersen LB, Melvaer LB, Videbech P, Lamont RF, Joergensen JS. Risk factors for developing post-traumatic stress disorder following childbirth: A systematic review. Acta Obstet Gynecol Scand 2012; 91: 1261-72.
12. Galatzer-Levy IR, Bryant RA. 636,120 ways to have posttraumatic stress disorder. Persp Psychol Sci 2013; 8: 651-62.
13. Blanchard, EB, Hickling EJ, Barton KA, Taylor AE, Loos WR, Jones-Alexander J. One-year prospective follow-up of motor vehicle accident victims. Behav Res Ther 1996; 34: 775-86.
14. Rothbaum BO, Foa EB, Riggs DS, Murdock TB, Walsh W. A prospective examination of posttraumatic stress disorder in rape victims. J Trauma Stress 1992; 5: 455-75.
15. Epstein RS. Avoidant symptoms cloaking the diagnosis of PTSD in patients with severe accidental injury. J Trauma Stress 1993; 6: 451-8.
16. Mayou R, Tyndel S, Bryant B. Long-term outcome of motor vehicle injury. Psychosom Med 1997; 59: 578-84.
17. Mayou RB, Bryant R. Duthrie, B. Psychiatric consequences of road traffic accidents. BMJ 1993; 307(6905): 647-51.
18. Wisco BE, Marx BP. Miller MW, Krystal EJ, Southwick JH, Pietrzak SM *et al*. A Comparison Of ICD-11 And DSM Criteria for Posttraumatic Stress Disorder In Two National Samples Of U.S. Military Veterans. J Affect Dis 2015; 223: 17-19.
19. Karatzias T, Cloitre M, Maercker A, Kauzlauskus E, Sherlin M, Hyland P *et al*. PTSD And Complex PTSD: ICD-11 Updates On Concept and Measurement in the UK, USA, Germany And Lithuania. Eur J Psychotraumatol 2017; 8(Sup7): 1418103. Doi :10.1080/20008198.2017.1418103.
20. Ehlers A, Mayou, Ra, Bryant B. Psychological Predictors Of Chronic Posttraumatic Stress Disorder After Motor Vehicle Accidents. J Abnorm Psychol 1998; 107: 508-19.
21. Solomon Z, Benbenishty R, Waysman M, Bleich A. Compensation And Psychic Trauma: A Study of Israeli Combat Veterans. Am J Ortho-Psychol 1994; 64: 91-102.
22. Frueh BC,Hamner MB,Cahill SP, Gold PB, Hamlin KL. Apparent symptom Overreporting in Combat Veterans Evaluated for PTSD. Clin Psychol Rev 2000; 20: 853-85.
23. Sayer NA, Murdoch M, Carlson KF. Compensation and PTSD: Consequences for symptoms and treatment. PTSD Res Quart 2007; 18: 1-8.
24. Clark LA, Watson D, Mineska S. Temperament, personality, and the mood and anxiety disorders. J Abnorm Psychol 1994; 103: 103-16.
25. Miller MW, Resick PA. Internalizing and externalizing subtypes in female sexual assault survivors: implications for the understanding of complex PTSD. Behav Ther 2007; 38: 58-71.
26. Gil S. Pre-traumatic personality as a predictor of posttraumatic stress disorder among undergraduate students exposed to a terrorist attack: A prospective study in Israel. Pers Ind Diff 2005; 39: 819-27.
27. Breslau N, Davis GC, Andreski P. Risk factors for PTSD-related traumatic events: A prospective analysis. Am J Psychiatry 1995; 152: 529-35.
28. Talbert FS, Braswell LC, Albrecht JW, Hyer LA, Boudewyns PA. NEO-PI profiles in PTSD as a function of trauma level. J Clin Psychol 1993; 49: 663- 9.
29. Casella L, Motta, RW. Comparison of characteristics of Vietnam veterans with and without Posttraumatic Stress Disorder. Psychol Rep 1990; 67: 595-605.
30. Hyer L, Braswell L, Albrecht B, Boyd S, Boudewyns, P, Talbert S. Relationship of NEO-PI to personality styles and severity of trauma in chronic PTSD victims. J Clin Psychol 1994; 50: 699-707.
31. Sutker PB, Bugg F, Allain AN. Psychometric prediction of PTSD among POW survivors. Psychol Assess 1991; 3: 105-110.

32. Sutker, PB, Davis JM, Uddo M, Ditta SR. War zone stress, personal resources, and PTSD in Persian Gulf War returnees. J Abnorm Psychol 1995; 104: 444-452.
33. O'Toole BI, Marshall RP, Schureck RJ, Dobson M. Posttraumatic stress disorder and comorbidity in Australian Vietnam veterans: Risk factors, chronicity and combat. Austr N Z J Psychiatry 1998; 32: 32-42.
34. Lonigan CJ, Shannon MP, Taylor CM, Finch AJ, Sallee FR. Children exposed to disaster: II. Risk factors for the development of post-traumatic symptomatology. J Am Acad Child Adol Psych 1994; 33: 94-105.
35. Fauerbach JA, Lawrence JW, Schmidt CW, Munster AM, Costa PT. Personality predictors of injury-related posttraumatic stress disorder. J Nerv Ment Dis 2000; 188: 510-17.
36. McFarlane AC. An Australian disaster: The 1983 bushfires. Int J Ment Health 1990; 19: 36-47.
37. McFarlane AC. Risk factors for the acute biological and psychological response to trauma. In: Yehuda R (ed.). Risk factors for posttraumatic stress disorder. Washington, DC: American Psychiatric Press, 1999, 163-190.
38. DiGangi JA, Gomez D, Mendoza L, Jason LA, Keys CB. Pretrauma risk factors for posttraumatic stress disorder: A systematic review of the literature. Clin Psychol Rev 2013; 33: 728-44.
39. Domschke K. Patho-genetics of posttraumatic stress disorder. Psychiatria Danubina 2012; 24: 267-73.
40. Zakin G, Solomon Z, Neria Y. Hardiness, attachment style, and long-term psychological distress among Israeli POWs and combat veterans. Pers Ind Diff 2003; 34:819-829.
41. Thomassen AG, Sigurd W. Hystad SW, Johnsen BH, Johnsen GE, Bartone BT. The effect of hardiness on PTSD symptoms: A prospective mediational approach. Milit Psychol 2018; 30(2): 142-51.
42. Miller MW. Personality and the etiology and expression of PTSD: a three-factor model perspective. Clin Psychol Sci Practice 2003; 10: 373-93.
43. Fedoroff IC, Taylor S, Asmundson GJG, Koch WJ. Cognitive factors in traumatic stress reactions: Predicting PTSD symptoms from anxiety sensitivity and beliefs about harmful events. Behav Cogn Psychother 2000; 28: 5-15.
44. Marshall GN, Miles JNV, Stewart SH. Anxiety Sensitivity and PTSD Symptom Severity are Reciprocally Related: Evidence from a Longitudinal Study of Physical Trauma Survivors. J Abnorm Psychol 2010; 119: 143-50.
45. Stephenson KL, Valentiner DP, Kumpula MJ, Orcutt HK. Anxiety sensitivity and posttrauma stress symptoms in female undergraduates following a campus shooting. J Trauma Stress 2009; 22(6): 489-96.
46. Asmundson GJ, Stapleton JA. Associations between dimensions of anxiety sensitivity and PTSD symptom clusters in active-duty police officers. Cogn Behav Ther 2008; 37:66-75.
47. Collimore KC, McCabe RE, Carleton RN, Asmundson GJ. Media exposure and dimensions of anxiety sensitivity: Differential associations with PTSD symptom clusters. J Anxiety Disord 2008; 22: 1021-8.
48. Bryant RA, Panasetis P. Panic symptoms during trauma and acute stress disorder. Behav Res Ther 2001; 39: 961-6.
49. Feldner MT, Zvolensky MJ, Schmidt NB, Smith RC. A prospective test of anxiety sensitivity as a moderator of the relation between gender and posttraumatic symptom maintenance among high anxiety sensitive young adults. Depress Anxiety 2008; 25: 190-9.
50. Boffa, JW, Norr AM, Raines AM, Albanese BJ, Short NA, Schmidt NB. Anxiety Sensitivity Prospectively Predicts Posttraumatic Stress Symptoms Following a Campus Shooting. Behav Ther 2016; 47: 367-76.
51. Brown KW, Ryan RM. The benefit of being present: mindfulness ans its role in psychological well-being. J Pers Soc Psychol 2003; 84: 822-48.
52. Schoorl M, Van Mil-Klinkenberg L, Van Der Does W. Mindfulness skills, anxiety sensitivity, and cognitive reactivity in patients with posttraumatic stress disorder. Mindfulness 2015; 6(5): 1004-11.
53. Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiatry 1995; 52: 1048- 60.
54. Kulka RA, Schlenger WE, Fairbank JA, Hough RL, Jordan BK,Marmar CR *et al*. Trauma and the Vietnam War Generation:Report of Findings from the National Vietnam Veterans Readjustment Study. New York: Brunner/Mazel, 1990.
55. North CS, Nixon SJ, Shariat S, Mallonee S, McMillen JC, Spitznagel EL *et al*. Psychiatric disorders among survivors of the Oklahoma City bombing. J Am Med Assoc 1990; 282: 755-62.
56. King DW, King LA, Foy DW, Gudanowski DM. Prewar factors in combatrelated posttraumatic stress disorder: Structural equation modeling with a national sample of female and male Vietnam veterans. J Cons Clin Psychol 1996; 64: 520-31.
57. Koenen KC, Harley R, Lyons M, Wolfe, J, Simpson JC, Goldberg J *et al*. A twin registry study of familial and individual risk factors for trauma exposure and posttraumatic stress disorder. J Nerv Ment Dis 2002; 190: 209-18.
58. Green BL, Grace MC, Lindy JD, Gleser GC, Leonard A. Risk factors for PTSD and other diagnoses in a general sample of Vietnam veterans. Am J Psychiatry 1990; 147: 729-33.
59. Cederblad, M, Dahlin L. Intelligence and temperament as protective factors for mental health: A cross-sectional and prospective epidemiology study. Eur Arch Psychiatry Clin Neurosci 1995; 245: 11-19.
60. Fergusson DM, Lynskey MT. Adolescent Resiliency to Family Adversity. J Child Psychol Psychiatry 1996; 37: 281-92.
61. Silva RR, Alpert M, Munoz DM. Stress and vulnerability to posttraumatic stress disorder in children and adolescents. Am J Psychiatry 2000; 157: 1229- 1235.
62. Breh DC, Seidler GH. Is peritraumatic dissociation a risk factor for PTSD J Trauma Dissociation 2007; 8(1): 53-69.
63. Birmes P, Brunet A, Carreras D, Ducassé JL, Charlet JP, Lauque D *et al*. The predictive power of peritraumatic dissociation and acute stress symptoms for posttraumatic stress symptoms: a three-month prospective study. Am J Psychiatry 2003; 160: 1337-49.

64. Holeva V, Tarrier N. Personality and peritraumatic dissociation in the prediction of PTSD victims of road traffic accidents. J Psychosom Res 2001; (51): 687-92.
65. Ali T, Dunmore E, Clark D, Ehlers A. The role of negative beliefs in posttraumatic stress disorder: A comparison of assault victims and nonvictims. Behav Cogn Psychother 2002; 30: 249-57.
66. Frommberger U, Stieglitz RD, Straub S, Nyberg E, Schlickewei W, Kuner E *et al*. The concept of „sense of coherence" and the development of posttraumatic stress disorder in traffic accident victims. J Psychosom Res 1990; 46: 343-8.
67. Kaiser CF, Sattler DN, Bellack DR, Dersin J. A conservation of resources approach to a natural disaster: Sense of coherence and psychological distress. J Soc Behav Pers 1996; 11: 459-76.
68. Vickberg SMJ, Duhamel KN, Smith MY. Global meaning and psychological adjustment among survivors of bone marrow transplant. Psycho-Oncology 2001; 10: 29-39.
69. Parrot C, Howes JL. The application of cognitive therapy to posttraumatic stress disorder. In: Vallis TM, JL Howes, Miller PC (eds.). The challenge of cognitive therapy: Applications to nontraditional populations. New York: Plenum, 1991, 85-109.
70. Carlier IVE, Lambers RD, Gersons BPR. The dimensionality of trauma: A multidimensional scaling comparison of police officers with and without posttraumatic stress disorder. Psychiatry Res 2000; 97: 29-39.
71. Dutton MA, Burghard KJ, Perrin SG, Chrestman KR. Battered women's cognitive schemata. J Trauma Stress 1994; 7: 237-55.
72. Benight CC, Antoni, MH, Kilbourn K, Ironson G, Kumar MA, Fletcher MA *et al*. Coping self-efficacy buffers psychological and physiological disturbances in HIV-infected men following a natural disaster. Health Psychol 1997; 16: 248-55.
73. Ferren PM. Comparing perceived self-efficacy among adolescent Bosnian and Croatian refugees with and without posttraumatic stress disorder. J Trauma Stress 1999; 12: 405-20.
74. Alvarez-Conrad J, Zoellner LA, Foa EB. Linguistic predictors of trauma pathology and physical health. Appl Cogn Psychol 2001; 15:159-70.
75. Ehlers A, Mayou RA, Bryant B. Cognitive predictors of posttraumatic stress disorder in children: Results of a prospective longitudinal study. Behav Res Ther 2003; 41: 1-10.
76. Smith K, Bryant RA. The generality of cognitive bias in acute stress disorder. Behav Res Ther 2000; 3: 709-15.
77. Englehard IM, Macklin ML, McNally RJ. Emotion- and intrusion-based reasoning in Vietnam veterans with and without chronic posttraumatic stress disorder. Behav Res Ther 2001; 39: 1339-48.
78. Englehard IM, van den Hout MA, Arntz A, McNally RJ. A longitudinal study of „intrusion-based reasoning" and posttraumatic stress disorder after exposure to a train disaster. Behav Res Ther 2002; 40: 1415-34.
79. Mayou RA, Ehlers A, Bryant B. Posttraumatic stress disorder after motor vehicle accidents: 3-year follow-up of a prospective longitudinal study. Behav Res Ther 2002; 40: 665-75.
80. Solomon SD, Gerrity ET, Muff AM. Efficacy of treatments for posttraumatic stress disorder. J Am Med Assoc 1992; 268: 633-8.
81. Riskind JH. Looming vulnerability to threat: A cognitive paradigm for anxiety. Behav Res Ther 1997; 35: 386-404.
82. Reardon JM, Williams NL. The specificity of cognitive vulnerabilities to emotional disorders: Anxiety sensitivity, looming vulnerability and explanatory style. J Anxiety Disord 2007; 21: 625-43.
83. Williams NL, Shahar G, Riskind JH, Joiner TE. The looming maladaptive style predicts shared variance in anxiety disorder symptoms: Further support for a cognitive model of vulnerability to anxiety. J Anxiety Disord 2005; 19(2): 157-75.
84. Beevers CG, Lee H, Wells TT, Ellis AJ, Telch MJ. Association of predeployment gaze bias for emotion stimuli with later symptoms of PTSD and depression in soldiers deployed in Iraq. Am J Psychiatry 2011; 168(7): 735-41.
85. Elwood LS, Williams NL, Olatunji BO, Lohr JM. Interpretation biases in victims and non-victims of interpersonal trauma and their relation to symptom development. J Anxiety Disord 2007; 21(4): 554-67.
86. Amir N, Coles ME, Foa EB. Automatic and strategic activation and inhibition of threat-relevant information in posttraumatic stress disorder. Cognit Ther Res 2002; 26(5): 645-55.
87. Constans JI. Information-processing biases in PTSD. In: Vasterling JJ, Brewin C (eds). Neuropsychology of PTSD: Biological, Cognitive, and Clinical Perspectives. New York: Guilford Press; 2005, 105-129.
88. Yehuda R, Golier JA, Harvey PD, Stavitsky K, Kaufman S, Grossman RA *et al*. Relationship between cortisol and age-related memory impairments in Holocaust survivors with PTSD. Psychoneuroendocrinology 2005; 30(7): 678-87.
89. Bowman ML i Yehuda R. Risk Factors and the Adversity-Stress Model. In: Rosen, GM (ed.). Posttraumatic Stress Disorder: Issues and Controversies. West Sussex: John Wiley & Sons Ltd, 2008.
90. Bresla, N, Chilcoat HD, Kessler RC, Davis GC. Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit area survey of trauma. Am J Psychiatry 1999; 156: 902-7.
91. Bremner JD, Southwick SM, Johnson DR, Yehuda R, Charney DS. Childhood physical abuse and combat-related posttraumatic stress disorder in Vietnam veterans. Am J Psychiatry 1993; 150: 235-9.
92. Yehuda R, Resnick HS, Schmeidler J, Yang RK, Pitman RK. Predictors of cortisol and 3-methoxy-4-hydroxy-phenylglycol responses in the acute aftermath of rape. Biol Psychiatry 1998; 43: 855-9.
93. Galea S, Ahern J, Resnick H. Psychological sequelae of the September 11 terrorist attacks in New York City. New Engl J Med 2002; 346: 982-7.
94. Falsetti SA, Resick PA. Causal attributions, depression, and post-traumatic stress disorder in victims of crime. J Appl Soc Psychol 1995; 25: 1027-42.
95. Corneil W, Beaton R, Murphy S, Johnson C, Pike K. Exposure to traumatic incidents and prevalence of posttraumatic stress symptomatology in urban firefighters in two countries. J Occup Health Psychol 1999; 4: 131-41.

96. Wykes T, Whittington R. Prevalence and predictors of early traumatic stress reactions in assaulted psychiatric nurses. J Forensic Psychiatry 1998; 9: 643-58.
97. Aldwin CM, Sutton KJ, Lachman M. The development of coping resources in adulthood. J Pers 1996; 64(4): 837-71.
98. Heinrichs M, Wagner D, Schoch W, Soravia LM, Helhammer DH, Ehlert, U. Predicting posttraumatic stress symptoms from pretraumatic risk factors: A 2-year prospective follow-up study in firefighters. Am J Psychiatry 2005; 162: 2276-86.
99. Southwick SM, Morgan CA, Nicolaou AL, Charney DS. Consistency of memory for combat-related traumatic events in veterans of Operation Desert Storm. Am J Psychiatry 1997; 154: 173-77.
100. Yehuda R, Boisoneau D, Lowy MT, Giller EL. Dose- response changes in plasma cortisol and lymphocyte glucocorticoid receptors following dexamethasone administration in combat veterans with and without posttraumatic stress disorder. Arch Gen Psychiatry 1995; 52: 583-93.
101. Yehuda R, Southwick SM, Krystal JM, Charney DS, Mason JW. Enhanced suppression of cortisol following dexamethasone administration in combat veterans with posttraumatic stress disorder and major depressive disorder. Am J Psychiatry 1993; 150: 83-6.
102. Milad MR, Pitman RK, Ellis CB, Gold AL, Shin LM *et al*. Neurobiological basis of failure to recall extinction memory in posttraumatic stress disorder. Biol Psychiatry 2009; 66(12): 1075-82.
103. Stein MB, Paulus MP. Imbalance of approach and avoidance: the yin and yang of anxiety disorders. Biol Psychiatry 2009; 66(12): 1072-4.
104. Bremner JD, Staib LH, Kaloupek D, Southwick SM, Soufer R, Charney DS *et al*. Neural correlates of exposure to traumatic pictures and sound in Vietnam combat veterans with and without posttraumatic stress disorder: a positron emissiontomography study. Biol Psychiatry 1999; 45: 806-16.
105. Rauch SL, van der Kolk BA, Fisler RE, Alpert NM, Orr SP, Savage CR *et al.* A symptom provocation study of posttraumatic stress disorder using positron emission tomography and script-driven imagery. Arch Gen Psychiatry 1996; 53: 380-7.
106. Shin LM, Kosslyn SM, McNally RJ, Alpert NM, Thompson WL *et al*. Visual imagery and perception in posttraumatic stress disorder: a positron emission tomographic investigation. Arch Gen Psychiatry 1997; 54: 233-41.
107. Bremner JD, Randall P, Scott TM, Bronen RA, Seibyl JP, Soutwick SM *et al*. MRI-based measurement of hippocampal volume in patients with combat-related posttraumatic stress disorder. Am J Psychiatry 1995; 152: 973-81.
108. Gilbertson MW, Shenton ME, Ciszewski A, Kasai K, Lasko NB, Orr SP *et al*. Smaller hippocampal volume predicts pathologic vulnerability to psychological trauma. Nature Neuroscience 2002; 5: 1242-7.
109. Shin LM, Lasko NB, Macklin ML, Karpf RD, Milad MR, Orr SP *et al*. Resting metabolic activity in the cingulate cortex and vulnerability to posttraumatic stress disorder. Arch Gen Psychiatry 2009; 66(10): 1099-107.
110. Shin LM, Bush G, Milad MR, Lasko NB, Brohawn KH, Hughes KC *et al*. Exaggerated activation of dorsal anterior cingulate cortex during cognitive interference: a monozygotic twin study of posttraumatic stress disorder. Am J Psychiatry 2011; 168(9): 979-85.
111. Admon R, Lubin G, Stern O, Rosenberg K, Sela L, Ben-Ami H *et al*. Human vulnerability to stress depends on amygdala's predisposition and hippocampal plasticity. Proc Natl Acad Sci USA 2009; 106(33): 14120-5.
112. Admon R, Leykin D, Lubin G, Engert V, Andrews J, Prussner J *et al*. Stress-induced reduction in hippocampal volume and connectivity with the ventromedial prefrontal cortex are related to maladaptive responses to stressful military service. Human Brain Mapping 2013; 34(11): 2808-16.
113. Kim P, Evans GW, Angstadt M, Ho SS, Sripada CS *et al.* Effects of childhood poverty and chronic stress on emotion regulatory brain function in adulthood. Proc Natl Acad Sci USA 2013; 110: 18442-7.
114. Gee DG, Gabard-Durnam LJ, Flannery J, Goff B, Humphreys KL, Telzer EH *et al*. Early developmental emergence of human amygdala-prefrontal connectivity after maternal deprivation. Proc Natl Acad Sci USA 2013; 110: 15638-43.
115. Hendler T, Admon R. Predisposing Risk Factors for PTSD: Brain Biomarkers. In: Martin C *et al*. (eds). Comprehensive Guide to Post-Traumatic Stress Disorders. Cham: Springer International Publishing AG, 2016.
116. True WR, Lyons MJ. Genetic risk factors for PTSD: A twin study. In: Yehuda R (ed). Risk factors for posttraumatic stress disorder. Washington, DC: American Psychiatric Press, 1990, 61-78.
117. True WJ, Rice J, Eisen SA, Heath AC, Goldberg J, Lyons MJ *et al*. A twin study of genetic and environmental contributions to liability for posttraumatic stress symptoms. Arch Gen Psychiatry 1993; 50: 257-64.
118. Chantarujikapong SI, Scherrer JF, Xian H, Eisen SA, Lyons MJ, Goldberg J *et al.* A twin study of generalized anxiety disorder symptoms, panic disorder symptoms and posttraumatic stress disorder in men. Psychiatry Res 2001; 103: 133-46.
119. Delahanty DL, Raimonde AJ, Spoonster E. Initial posttraumatic urinary cortisol levels predict subsequent PTSD symptoms in motor vehicle accident victims. Biol Psychiatry 2000; 48: 940-7.
120. McFarlane AC, Atchison M, Yehuda R. The acute stress response following motor vehicle accidents and its relation to PTSD. Ann New York Acad Sci 1997; 821: 482-5.
121. Yehuda R. Are glucocortoids responsible for putative hippocampal damage in PTSD? How and when to decide. Hippocampus 2001; 11: 85-9.
122. Boscarino JA. Diseases among men 20 years after exposure to severe stress: Implications for clinical research and medical care. Psychosom Med 1997; 59: 605-14.
123. McNally RJ. Remembering trauma. Cambridge, MA: Harvard University Press, 2003.
124. Pole N. The psychophysiology of posttraumatic stress disorder: A meta-analysis. Psychol Bull 2007; 5: 725-46.

125. Paige SR, Reid GM, Allen MG, Newton JEO. Psychophysiological correlates of PTSD in Vietnam veterans. J Biol Psychiatry 1990; 27(4): 419-30.
126. Orr SP, Metzger LJ, Lasko NB, Macklin ML, Hu FB, Shalev AY *et al.* Physiologic responses to sudden, loud tones in monozygotic twins discordant for combat exposure: Association with posttraumatic stress disorder. Arch Gen Psychiatry 2003; 60: 283-8.
127. Keane TM, Kaloupek DG, Blanchard EB, Hsieh FY, Kolb LC, Orr SP *et al*. Utility of psychophysiological measurement in the diagnosis of posttraumatic stress disorder: Results from a Department of Veterans Affairs' cooperative study. J Consult Clin Psychol 1998; 66: 914-23.
128. Orr SP, Metzger LJ, Pitman RK. Psychophysiology of post-traumatic stress disorder. Psychiatry Clin North Am 2002; 25(2): 271-93.
129. Perkonigg A, Pfister H, Stein MB, Hofler M, Lieb R, Maercher A *et al*. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. Am J Psychiatry 2005; 162(7): 1320-7.
130. Blanchard EB, Hickling EJ, Taylor AE, Loos W. Psychiatric morbidity associated with motor vehicle accidents. J Nerv Ment Dis 1995; 183: 495-504.
131. Koren D, Arnon I, Klein E. Acute stress response and posttraumatic stress disorder in traffic accident victims: a one-year prospective, follow-up study. Am J Psychiatry 1999; 156: 367-73.
132. Davidson JRT, Hughes D, Blazer DG, George LK. Post-traumatic stress disorder in the community: an epidemiological study. Psychol Med 1991; 21: 731-21.
133. Breslau N, Davis GC. Posttraumatic stress disorder in an urban population of young adults: risk factors for chronicity. Am J Psychiatry 1992; 149: 671-5.
134. Green BL, Lindy JD, Grace MC, Glesser GC, Leonard AC, Korol M *et al.* Buffalo Creek survivors in the second decade: stabilityof stress symptoms. Am J Orthopsychiatry 1990; 60: 43-54.
135. Koren D, Arnon I, Klein E. Long term course of chronic posttraumatic stress disorder in traffic accident victims: a three-year prospective follow-up study. Behav Res Ther 2001; 39(12): 1449-58.
136. Harvey AG, Bryant RA. Two-year prospective evaluation of the relationship between acute stress disorder and posttraumatic stress disorder following mild traumatic brain injury. Am J Psychiatry 2000; 157: 626-8.
137. Zlotnick C, Warshaw M, Allsworth J, Shea MT, Keller MB. Chronicity in PTSD and predictors of course of comorbid PTSD in patients with anxiety disorders. J Trauma Stress Disord 1999; 12: 89-100.
138. Rachman S. Emotional processing, with special reference to post-traumatic stress disorder. Int Rev Psychol 2001; 13: 164-71.
139. Horowitz MJ. Stress response syndromes. Northvale, NJ: Jason Aronson, 1986.
140. Shalev AY. Posttraumatic stress disorder among injured survivors of a terrorist attack: predictive value of early intrusion and avoidance symptoms. J Nerv Ment Dis 1992; 180: 505-9.
141. Creamer M, Burgess P, Pattison P. Reaction to trauma: a cognitive processing model. J Abnorm Psychol 1992; 101: 452-9.
142. McFarlane AC. Avoidance and intrusion in posttraumatic stress disorder. J Nerv Ment Dise 1992; 180: 439-45.
143. Ehlers A, Clark DM. A cognitive model of posttraumatic stress disorder. Behav Res Ther 2000; 38: 319-45.
144. Difede J, Barocas D. Acute intrusive and avoidant PTSD symptoms as predictors of chronic PTSD following burn injury. J Trauma Stress 1999; 12: 363-9.
145. Roberts KA. Trauma recovery in military veterans with chronic PTSD: An emphasis on the problem of guilt. A treatment outcomes study. Dissertation Abstracts International 2000; 60(8-B), 4249.
146. Delahanty DL, Herberman HB, Craig KJ, Hayward MC, Fullerton CS, Ursano RJ *et al*. Acute and chronic distress and posttraumatic stress disorder as a function of responsibility for serious motor vehicle accidents. J Consult Clin Psychol 1997; 65: 560-7.
147. Hickling EJ, Blanchard EB, Buckley TC. Effects of attribution of responsibility for motor vehicle accidents on severity of PTSD symptoms, ways of coping, and recovery over six months. J Trauma Stress 1999; 12: 345-53.
148. Huw WW, Evans JJ, Needham P, Wilson BA. Neurological, cognitive andattributional predictors of posttraumatic stress symptoms after traumatic brain injury. J Trauma Stress 2002; 15: 397-400.
149. Janoff-Bulman R, Brickman P. Expectations and what people learn from failure. In : Feather NT (ed.). Expectations and actions. Hillsdale, NJ: Erlbaum, 1982, 207-237.
150. Frazier PA, Mortenson H, Steward J. Coping strategies as mediators of the relations among perceived control and distress in sexual assault survivors. J Couns Psychol 2005; 52: 267-78.
151. Koss MP, Figueredo AJ, Prince RJ. Cognitive mediation of rape's mental, physical, and social health impact: Test of four models in cross-sectional data. J Cons Clin Psychol 2002; 70: 926-41.
152. Peterson C, Seligman ME. Causal explanations as a risk factor for depression: Theory and evidence. Psychol Rev 1984; 91: 347-74.
153. McCormick RA, Taber JI, Kruedelback N. The relationship between attributional style and post-traumatic stress disorder in addicted patients. J Trauma Stress 1989; 2: 477-87.
154. Joseph SA, Brewin CR, Yule W, Williams R. Causal attributions and posttraumatic stress in adolescents. J Child Psychol Psychiatry 1993; 34: 247-53.

155. Foa EB, Ehlers A, Clark DM. The Posttraumatic Cognitions Inventory (PTCI): Development and validation. Psychol Assess 1999; 11: 303-14.
156. Tolin DF, Foa EB. Gender and PTSD: A cognitive model. In: Kimerling R, Ouimette P (ed). Gender and PTSD. New York: Guilford Press, 2002, 76-97.
157. Janoff-Bulman R. Shattered assumptions: Towards a new psychology of trauma. New York: Free Press, 1992.
158. Cascardi, M, Riggs DS, Hearst-Ikeda D, Foa EB. Objective ratings of assault safety as predictors of PTSD. J Interpers Viol 1996; 11: 65-78.
159. Ginzburg K, Solomon Z, Dekel R, Juvan N. Battlefield functioning and chronic PTSD: associations with percieved self efficacy and causal attribution. Pers Ind Diff 2003; 34: 463-76.
160. Orr SP, Claiborn JM, Altman B, Forgue DF,de Jong JB, Pitman RK, & Herz LR. Psychometric profile of posttraumatic stress disorder, anxious, and healthy Vietnam veterans: correlations with psychophysiologic responses. J Consult Clin Psychol 1990; 58: 329-35.
161. Regehr C, Cadell S, Jansen K. Perceptions of control and long-term recovery from rape. Am J Orthopsychiatry 1999; 69: 110-15.
162. Solomon Z, Benbenishty R, Neria Y, Abramowitz M, Ginzburg K, Ohry A. Assessment of PTSD: validation of the revised PTSD Inventory. Isr J Psychiatry Rel Sci 1993; 30: 110-15.
163. Antonovsky A. Unraveling the mystery of health. San Francisco: Jossy-Bass health series, 1987.
164. Taylor S, Fedoroff IC, Koch WJ, Thordarson DS, Fecteau G, Nicki RM. Posttraumatic stress disorder arising after road traffic collisions: Patterns of response to cognitive-behavior therapy. J Consult Clin Psychol 2001; 69: 541-51.
165. Bryant RA, Moulds ML, Guthrie RM, Dang ST, Nixon RDV. Imaginal exposure alone and imaginal exposure with cognitive restructuring in treatment of posttraumatic stress disorder. J Consult Clin Psychol 2003; 71: 706-12.
166. McDonagh A, Friedman M, McHugo G, Ford J, Sengupta A, Mueser K *et al*. Randomized trial of cognitive-behavioral therapy for posttraumatic stress disorder in adult female survivors of childhood sexual abuse. J Consult Clin Psychol 2005; 73: 515-24.
167. Stein NR, Dickstein BD, Schuster J, Litz BT, Resick PA. Trajectories of response to treatment for posttraumatic stress disorder. Behav Ther 2012; 43: 790-800.
168. Ehlers A, Mayou RA, Bryant B. Psychological predictors of chronic posttraumatic stress disorder after motor vehicle accidents. J Abnorm Psychol 1998; 107: 508-19.
169. Aderka IM, Foa EB, Applebaum E, Shafran N, Gilboa-Schechman E. Direction of influence between posttraumatic and depressive symptoms during prolonged exposure therapy among children and adolescents. J Consult Clin Psychol 2011; 79: 421-5.
170. Aderka IM, Gillihan SJ, McLean CP, Foa EB. The relationship between posttraumatic and depressive symptoms during prolonged exposure with and without cognitive restructuring for the treatment of posttraumatic stress disorder. J Consult Clin Psychol 2013; 81: 375-82.
171. Gillespie K, Duffy M, Hackmann A, Clark DM. Community-based cognitive therapy in the treatment of post-traumatic stress disorder following the Omagh bomb. Behav Res Ther 2002; 40: 345-57.
172. Klarić M, Frančišković T, Klarić B, Krešić M, Grković J, Diminić Lisica I *et al*. Social support and PTSD symptoms in war-traumatized women in Bosnia and Herzegovina. Psychiatria Danubina 2008; 20(4): 466-73.
173. Andrews B, Brewin CR, Rose S. Gender, social support, and PTSD in victims of violent crime. J Trauma Stress 2003; 16(4): 421-7.
174. Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma exposed adults. J Consult Clin Psychol 2000; 68 (5): 748-58.
175. Ozer EJ, Best SR, Lipsey TL, Weiss DS. Predictors of posttraumatic stress disorder and symptoms in adults: a meta analysis. Psychol Bull 2003; 129 (1): 52-73.
176. Clapp JD, Gayle Beck J. Understanding the relationship between PTSD and social support: the role of negative network orientation. Behav Res Ther 2009;47(3): 237-44.
177. Blanchard EB, Hickling EJ, Taylor AE, Loos WR, Gerardi J. Psychological morbidity associated with motor vehicle accidents. Behav Res Ther 1994; 32: 283-90.
178. Bryant RA, Harvey AG. Avoidant coping style and post-traumatic stress following motor vehicle accidents. Behav Res Ther 1995; 33: 631-5.
179. Bryant B, Mayou RA, Lloyd-Bolstock S. Compensation claim following road accidents: A six year follow-up study. Med Sci Law 1997; 37: 326-36.
180. Sayer, NA, Spoont M, Nelson DB, Nugent S. Development and Psychometric Properties of the Disability Application Appraisal Inventory. Psychol Assess 2004; 16: 192-6.
181. Sayer NA, Spoont M, Nelson D. Veterans seeking disability benefits for post-traumatic stress disorder: Who applies and the self-reported meaning of disability compensation. Soc Sci Med 2004; 58: 2133-43.

Alzheimerova bolest – utjecaj na život i psihičko zdravlje njegovateljica

/ Alzheimer's Disease – Influence on Female Caregivers' Living and Mental Health

Suzana Uzun[1,2], Ninoslav Mimica[1,3], Oliver Kozumplik[1,2], Marija Kušan Jukić[4], Ivana Todorić Laidlaw[1], Dubravka Kalinić[3], Nela Pivac[5], Trpimir Glavina[6,7], Ivan Požgain[2,8]

[1]Klinika za psihijatriju Vrapče, Zagreb, Hrvatska, [2]Sveučilište Josipa Jurja Strossmayera u Osijeku, Medicinski fakultet Osijek, Osijek, [3]Medicinski fakultet Sveučilišta u Zagrebu, Zagreb, [4]Centar za mentalno zdravlje i prevenciju ovisnosti Nastavnog zavoda za javno zdravstvo «Dr. Andrija Štampar», Zagreb, [5]Institut Ruđer Bošković, Zagreb, [6]Klinika za psihijatriju, Klinički bolnički centar Split, Split, Hrvatska, [7]Medicinski fakultet Sveučilišta u Splitu, Split, Hrvatska, [8]Klinika za psihijatriju, Klinički bolnički centar Osijek, Osijek, Hrvatska

[1]University Psychiatric Hospital Vrapče, Zagreb, Croatia, [2]Josip Juraj StrossmayerUniversity of Osijek, Faculty of Medicine in Osijek, Osijek, [3]University of Zagreb, School of Medicine, Zagreb, Croatia, [4]Andrija Štampar Teaching Institute of Public Health, Zagreb, Croatia, [5]Ruđer Bošković Institute, Zagreb, Croatia, [6]Clinic for Psychiatry, Clinical Hospital Center Split, Split, Croatia, [7]University of Split, School of Medicine, Split, Croatia, [8]Clinic for Psychiatry, Clinical Hospital Center Osijek, Osijek, Croatia

Demencija je javnozdravstveni problem koji će postati sve vidljiviji kako stanovništvo stari. Danas u svijetu živi 50 milijuna ljudi oboljelih od demencije, a procjenjuje se da će do 2030. broj oboljelih narasti na 65,7 milijuna, odnosno na 115,4 milijuna oboljelih do 2050. godine. Danas kada demenciju nastojimo dijagnosticirati što ranije, bitno je oboljelima i njihovim obiteljima ponuditi kontinuirani i što kvalitetniji program liječenja i skrbi. U ovom radu željeli smo pokazati koji su glavni problemi vezani uz Alzheimerovu bolest i druge demencije u suvremenom svijetu, a bitno utječu na život žena njegovatelja. Opisan je utjecaj na žene koje skrbe za ljude s demencijom u ulozi profesionalnog njegovatelja i na žene koje preuzimaju ulogu neformalnog njegovatelja osobe oboljele od demencije. Rano prepoznavanje emocionalnog stresa kod njegovatelja nužno je kako bi se uspjelo preventivno djelovati (savjetovanje, suportivna psihoterapija, kognitivno-bihevioralni tretman), te spriječiti razvoj ili pogoršanje već postojećih tjelesnih bolesti (npr. kardiovaskularnih), odnosno mentalnih poremećaja od kojih su, osim nesanice, najčešći anksioznost i depresivnost.

/ Dementia is a public health problem that will become more obvious as the population grows older. There are 50 million people with dementia in the world, and it is estimated that the number of people with dementia will rise to 65.7 million by 2030, and 115.4 million by 2050. At present, we are trying to diagnose dementia as early as possible, and it is important to offer patients and their families a continuous and high-quality program of treatment and care. In this article, we wanted to show the main problems connected with Alzheimer's disease and other dementias in the modern world which influence the lives of female caregivers. The influence on women who take care of people with dementia as professional caregivers, as well as women who take the role of an informal caregiver of a person with dementia has been described. Early recognition of emotional stress in caregivers is necessary for successful preventive actions (counselling, supportive psychotherapy, cognitive-behavioural treatment) and for preventing the development or worsening of already existing somatic diseases (e.g. cardiovascular), as well as mental disorders, among which, apart from insomnia, anxiety and depression are the most common forms.

STRUČNI RAD / *PROFESSIONAL PAPER* Soc. psihijat. | 47 (2019) | 86-101

ADRESA ZA DOPISIVANJE /
***CORRESPONDENCE*:**
Doc. prim. dr. sc. Suzana Uzun, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
E-pošta: suzana.uzun@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's disease*
Demencija / *Dementia*
Njegovatelji / *Caregivers*
Psihički poremećaji / *Mental disorders*
Žene / *Women*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.86

UVOD

Demencija je javno zdravstveni problem koji će postati sve vidljiviji kako stanovništvo stari. Danas u svijetu živi 50 milijuna ljudi oboljelih od demencije, a procjenjuje se da će do 2030. broj oboljelih narasti na 65,7 milijuna, odnosno na 115,4 milijuna oboljelih do 2050. godine (1,2). U dobi od 65 godina Alzheimerova bolest (AB) pojavljuje se u 0,6 % muškaraca i 0,8 % žena. Učestalost raste s dobi pa se procjenjuje da je incidencija oko 0,5 % za svaku godinu između 65. i 69. godine života, oko 1 % za svaku godinu od 70. do 74. godine; 2 % za svaku godinu od 75. do 79. godine; 3 % godišnje od 80. do 84. godine i 8 % godišnje nakon 85. godine (3). U dobi od 85 godina prisutna je u 14 % žena i 11 % muškaraca, u dobi od 90 godina taj je odnos 25 % i 21 %, a u dobi od 95 godina 41 % i 36 %. Od ukupno oboljelih bolesnika od demencije 50-60 % imaju najčešći tip demencije, tj. AB. Učestalost i incidencija AB povećavaju se eksponencijalno sa životnom dobi (3-5). Demografski trend trajno ubrzano rastućeg starijeg hrvatskog pučanstva, koje po procjeni u 2014. godini iznosi čak 18,62 % udjela 65-godišnjaka, posljedično donosi sve veću razliku između osobitosti zdravstvenih potreba starijih osoba i njihovog zadovoljenja. Najveće dostignuće, a time i izazov 21. stoljeća je veličina pojavnosti udjela stogodišnjaka odnosno dugovječnih osoba starijih od 95 godina. Tako je u Hrvatskoj broj stogodišnjaka, odnosno dugovječnih osoba starijih od 95 go-

INTRODUCTION

Dementia is a public health problem that will become increasingly obvious as the population ages. Today, 50 million of people with dementia live in the world and it is estimated that the number of affected people will rise to 65.7 million by 2030, and 115.4 million by 2050 (1,2). At the age of 65, Alzheimer's disease (AD) occurs in 0.6% men and 0.8% women. The frequency increases with age and it is estimated that the incidence is 0.5% for every year between 65 and 69 years of age, 1% for every year between 70 and 74, 2% for every year between 75 and 79, 3% for every year between 80 and 84, and 8% after 80 (3). At the age of 85 it is present in 14% of women and 11% of men; at the age of 90 it is present in 25% of women and 21% of men; at the age of 95 it is present in 41% of women and 36% of men. Of the total number of people with dementia, 50-60% have the most frequent type of dementia, that is, AD. The frequency and incidence of AD increase exponentially with age (3-5). Regarding the demographic trend in Croatian population whose aging is permanently accelerated it is estimated that in 2014 18.62% of people aged 65 will consequently experience more and more difference between the specificity of their health needs of and their fulfilment. Both the greatest achievement the greatest challenge of the 21st century is the size of incidence of proportion of 100-year-olds, that is, people over 95 years of age. The number of 100-year-olds, that is, people over 95 years of age in Crodina, 2001. godine iznosio 1.455 (1.132 starije žene i 323 starije muške osobe). U usporedbi s popisom 2011. godine, broj dugovječnih osoba starijih od 95 godina, iznosio je 2.201 (1.719 starijih žena i 482 starijih muških osoba), što ukazuje na povećanje od 51,21 % (34,15 % starijih žena i 49,23 % starijih muških osoba) u desetogodišnjem razdoblju (6). Hrvatska, kao zemlja čije je prosječno stanovništvo jedno od najstarijih u Europi, treba napraviti akcijski plan za borbu s AB, tj. znatno ozbiljnije se pripremati za nadolazeću epidemiju te bolesti u skoroj budućnosti (7,8). Trošak liječenja demencije je 600 milijardi godišnje na svjetskoj razini; troškovi se odnose na medicinsku, socijalnu, formalnu i neformalnu skrb. U razvijenim zemljama na neformalnu skrb troši se 45 % sredstava, na socijalnu skrb 40 %, a 15 % na medicinsku skrb. U siromašnijim zemljama većina sredstava odlazi na neformalne načine skrbi (9). Sukladno Globalnoj povelji o Alzheimerovoj bolesti koju je usvojilo Međunarodno udruženje za Alzheimerovu bolest u rujnu 2008. godine, a na hrvatski jezik prevela i poduprla Hrvatska udruga za Alzheimerovu bolest, navodi se da demencija utječe na mnoge aspekte života oboljele osobe kao i osoba koje ju okružuju, a posebice onih koji ih iz dana u dan njeguju (10). Raspon potencijalnih izvora socijalne podrške pokazao se kao jedan od najznačajnijih medijatora stresa i uspješnijeg suočavanja s AB (11,12). Danas kada demenciju nastojimo dijagnosticirati što ranije bitno je oboljelima i njihovim obiteljima ponuditi kontinuirani i što kvalitetniji program liječenja i skrbi (7,8). Skrb za osobu oboljelu od AB ili druge demencije, u našim je uvjetima najčešće na članovima obitelji, a oni obično nisu stručne osobe. Takva skrb zahtijeva barem mali stupanj znanja o problemima oboljele osobe. Zato su informiranje, podučavanje i savjetovanje obitelji osobe s demencijom sastavni dio cjelovitog procesa dijagnosticiranja, liječenja i skrbi za oboljelu osobu (12). Skrb za nemoćnoga člana obitelji jedan

atia was 1455 in 2001 (1132 older women and 322 older men). In comparison with the register from 2011, the number of long-lived people older than 95 was 2201 (1719 older women and 482 older men), which suggests an enlargement of 51.21% (34.15% of older women and 49.23% of older men) in a 10 year period (6). Croatia as a country with an average age of population that places it among the oldest in Europe needs to make an action plan to combat AD, that is, to prepare much more seriously for the upcoming epidemic of this illness in the near future (7,8). The cost of treatment of dementia is $600 billion worldwide; the cost concerns medical, social, formal, and non-formal care. In developed countries 40% of resources are spent on non-formal care, 40% on social care and 15% on medical care. In poorer countries most resources are spent on non-formal care (9). In parallel with the Global Declaration of AD that was adopted by the Alzheimer's Disease International in September 2008, and which was translated into Croatian and supported by the Alzheimer Croatia, it is stated that dementia influences many aspects of the affected person's life as well as the lives of people surrounding the affected person, especially those who take care of them on a daily basis (10). The range of potential sources of social support has been proven to be one of the most important mediators of stress and more successful coping with AD (11,12). Today, when we try to diagnose dementia as early as possible, it is important to offer a continuous and high-quality program of treatment and care to the affected people and their families (7,8). In our environment, care for a person with AD or other dementias is most often provided by family members and they are most often not professionals. This kind of care requires at least a small degree of knowledge of problems of the affected person. Therefore, informing, teaching, and advising the family of the person with dementia are integral parts of the overall process of diagnosing, treating, and caring for the affected person (12). The care for the weak member of je od najstresnijih događaja u životu obitelji. Skrbnici su izloženi primarnim stresorima: događajima i aktivnostima izravno povezanima s pružanjem pomoći oboljeloj osobi, te sekundarnim stresorima: promjenama u životu nastalima zbog pružanja skrbi (13). Pearlin i sur. u svojem modelu procesa stresa u skrbnika osoba oboljelih od demencije opisuju kako usmjeriti pomoć (14). Psihološke intervencije za skrbnike uključuju: procjenu stanja i izloženosti skrbnika opisanim stresorima te procjenu izvora pomoći. U sklopu tretmana za skrbnike sljedeće su strategije: edukacija, kontrola stresa, pružanje potpore – individualno i grupno te savjetovanje skrbnika i savjetovanje obitelji (15).

Svrha je ovog rada pokazati koji su glavni problemi vezani uz AB u suvremenom svijetu, a bitno utječu na život žena njegovatelja. Opisan je utjecaj na žene koje skrbe za ljude s demencijom u ulozi profesionalnog njegovatelja i žene koje preuzimaju ulogu neformalnog njegovatelja osobe oboljele od demencije. Poznato je da diljem svijeta demencija neproporcionalno utječe na žene. U mnogo zemalja postoji očekivanje da će se obitelj skrbiti za starije članove obitelji, uključujući i one s demencijom. To očekivanje se često proteže na očekivanje da će ženski članovi obitelji preuzeti ulogu izravnog njegovatelja. Posebice se u zemljama s niskim nacionalnim bruto dohotkom pokazalo važnim osigurati dostupnost usluga zajednice neobrazovanim ženama ili ženama s niskim stupnjem obrazovanja (16).

POLOŽAJ I ULOGA ŽENA NJEGOVATELJA U BRIZI O OBOLJELIMA OD ALZHEIMEROVE BOLESTI

Žene čine većinu starijeg stanovništva. Godine 2014. 62 % stanovništva starijeg od 80 godina bile su žene, a starenje stanovništva pogoto-

the family is one of the most stressful events in family life. Caregivers are exposed to primary stressors, events and activities directly connected with helping the affected person, and secondary stressors, changes in one's life that occurred due to providing care (13). Pearlin et al. in their Stress process model for caregivers of individuals with dementia describe how to direct help (14). Psychological interventions for caregivers include the evaluation of condition and exposition of caregiver to the described stressors and the evaluation of the source of help. As part of treatment for caregivers, the strategies are the following: education, stress control, providing help – individually and in a group, and advising the caregiver and the family (15).

The aim of this article is to show which main problems are connected to AD in the modern world, which significantly influence the lives of women caregivers.

The influence on women that take care of people with dementia in the role of a professional caregiver and women who take the role of a non-formal caregiver of a person with dementia has been described. It is well known that all around the world dementia affects women disproportionally. In many countries there is an expectation that the family will take care of older family members, including those with dementia. It is often expected of female members of the family to directly take care of the affected member of the family. The importance of securing accessibility of social support for women without education or women with a low level of education has been shown, especially in the countries with low income (16).

STATUS AND ROLE OF WOMEN CAREGIVERS OF INDIVIDUALS WITH ALZHEIMER'S DISEASE

Women are the majority of the older population. In 2014, 62% of population older than 80 years of age were women, and the aging of the vo je ubrzano u Africi, Latinskoj Americi, na Karibima i u Aziji (17). Međutim, učestalost demencije diljem svijeta je u porastu. Do 2050. godine 71 % ljudi s demencijom živjet će u zemljama s niskim nacionalnim bruto dohotkom. Učinak demencije na život žena značajniji je nego za muškarce. Žene su te koje u bitno većoj mjeri pružaju neformalnu njegu ljudima s demencijom pa su oko dvije trećine neformalnih njegovatelja žene. Taj omjer je puno veći u zemljama s niskim i srednjim bruto nacionalnim dohotkom, te je stoga učinak pružanja njege na zdravlje i dobrobit, kao i financijski učinak, veći za žene u zemljama s niskim bruto nacionalnim dohotkom (17). Žene također čine većinu formalne njegovateljske radne snage, posebice u njezi osoba s demencijom te su one te koje pružaju većinu zdravstvene i socijalne skrbi u zajednici, bolnicama i domovima (17).

Veliki broj istraživanja o utjecaju demencije na žene proveden je u zemljama s visokim bruto nacionalnim dohotkom, ali potrebno je i bolje razumijevanje problema s kojima se suočavaju žene u zemljama s niskim bruto nacionalnim dohotkom (16).

Kad se pojavi bolest članovi obitelji i okolina bolesnika kao i on sam prolaze kroz različite faze njenog prihvaćanja. Postoji ogromna potreba u cjelokupnoj zajednici za što boljim razumijevanjem bolesti, te načinima ophođenja prema bolesniku/obitelji, a sam bolesnik/obitelj ima potrebu što više saznati o svojoj bolesti i stanju, svojim mogućnostima, pravima i obvezama (17). Muški njegovatelji, supružnici, pomažu suprugama nanijeti *make-up*, obući se, kupuju im kozmetičke proizvode na koje su one prethodne naviknute. Supruge njegovateljice pak pomažu supružnicima obući se, obrijati se i počešljati (17). Poželjno je za oboljelog da što duže bude u obiteljskom okruženju uz kvalitetnu njegu. Od velike pomoći su tzv. dnevni boravci ili dnevne bolnice, gdje oboljeli tijekom dana imaju odgovarajuću njegu, tret-

population is especially accelerated in Africa, Latin America, in the Caribbean and in Asia (17). Nevertheless, the frequency of dementia is growing worldwide. By 2050, 71% of people with dementia will live in countries with low national income. The effect of dementia on the lives of women is more significant in comparison with men. Women are the ones who to a higher degree provide non-formal care of people with dementia; two thirds of non-formal caregivers are women. This ratio is much higher in countries with low and middle national income, and therefore the effect of caregiving on health and wellbeing, as well as the financial effect, is higher for women in countries with low national income (17). Women also make up the majority of formal caregivers, especially in the care of individuals with dementia, and they are the ones who provide the majority of health and social care in the community, hospitals, and nursing homes (17).

A large number of investigations of the influence of dementia on women has been performed in countries with high national income, but there is a necessity for a better understanding of the problem women face in countries with low national income (16).

When illness occurs, family members and the patient's environment, as well as the patient, go through different stages of its acceptance. There is an immense necessity in the whole community for a good understanding of the illness and ways of communicating with the patient through families, and the patient/family have the need to learn as much as possible about the illness and the condition, options, rights, and obligations (17). Male caregivers, husbands, help their wives to dress and put on make-up; they buy them cosmetic products which they were previously used to. Wives caregivers help their husbands dress, shave, and comb their hair (17). It is advisable for the affected person to be in a family surrounding with quality care. Day hospitals are of great help, where patients manske aktivnosti i druženja, a za to vrijeme član obitelji može obavljati druge poslove ili se jednostavno odmoriti. Dnevni boravci dolaze u obzir samo u početnoj fazi bolesti, dok je još moguć transport oboljelog i primjerena terapijska aktivnost (18). Dostupnost socijalne podrške pomaže kod prilagodbe na bolest, dok njena odsutnost dovodi do pogoršanja ishoda skrbi (depresivnosti i njegovateljskog stresa) kako za oboljelu osobu tako i za njegovatelja (19,20). Koji će oblik socijalne podrške pojedinom njegovatelju biti važniji ovisi svakako i o stadiju bolesti pa će tako instrumentalna podrška biti iznimno značajna u akutnoj fazi bolesti kada su kapaciteti oboljele osobe ograničeni u izvršavanju svakodnevnih aktivnosti. Emocionalna podrška u svim fazama bolesti može također unaprijediti suočavanje s izazovima skrbi (21). Socijalna podrška označava dostupne resurse u socijalnoj okolini koji pridonose dobrobiti njegovatelja i pomažu mu u obnošenju njegove uloge (22-24). Postoji distinkcija između „povezujuće" podrške i „nepovezane" podrške, koja se temelji na percepciji njegovatelja oboljelih od demencije u primanju pomoći, tj. podrške. „Povezujuća" podrška označava interakciju koju njegovatelj percipira kao pomažuću u bavljenju njegovim/njezinim potrebama. „Nepovezana" podrška označava interakcije/u koja pojačava otuđenost njegovatelja, jer podrška nije kongruentna s potrebama koje percipira njegovatelj (2,25). Rezultati istraživanja Kovačić Petrović i Repovečki (26) upućuju na simptome sagorijevanja i kod obiteljskih i profesionalnih djelatnika, te na nedostatnu skrb za osobe koje se brinu o oboljelima od AB koja je kronična bolest i uzrokuje stresne odgovore i kod članova obitelji koji su najčešći njegovatelji. Važno bi bilo razviti specifične suportivne programe za obiteljske njegovatelje kakvi već postoje u mnogim zemljama (26). Otprilike dvije trećine ljudi s demencijom u zemljama s višim bruto nacionalnim dohotkom živi u vlastitim domovima. Njega osoba s demencijom ponaj-

have adequate care during the day, treatment activities, and a chance to socialize; during that time, a member of the family can do other activities or simply relax. Day care becomes an option only during the initial stage of the illness when it is still possible to transport the patient and provide adequate therapeutic activity (18). The accessibility of social support helps them adapt to the illness while its absence leads to a worsening in the outcome of caretaking (depression and caregiver's stress) for the patient but also for the caregiver (19,20).

Which type of social support will be more important to a particular caregiver depends on the stage of the illness. Instrumental support will be very important in the acute stage of the illness, when the capacities of the affected person are limited when it comes to performing everyday activities. Emotional support in all stages of the illness can also improve coping with challenges in providing care (21). Social support presents accessible resources in a social environment, which contribute to the wellbeing of the care provider and help him/her in performing his/her role (22-24). There is a distinction between "connecting" support and "non-connecting" support, which is based on the perception of caregivers of individuals with dementia in receiving help, that is, support. "Connecting" support means interaction which the care giver perceives as helping his/her needs. "Non-connecting" support means interaction during which the detachment of the caregiver is enhanced because the support is not congruent with the needs perceived by the caregiver (2,25). The results of the research conducted by Kovacic-Petrovic and Repovecki point to the symptoms of burnout in family and professional workers and to insufficient care for people who take care of individuals with AD, which is a chronic illness and causes stress response in family members who are most often caregivers. It would be important to develop specific supporting programs for family caregivers that are present in many countries (26). About two thirds of people with dementia in countries with higher prije se provodi u zajednici. U zemljama s niskim bruto nacionalnim dohotkom ta brojka je mnogo veća iako ju je teško kvantificirati. Uobičajeno je da njegu pružaju članovi obitelji (najčešće kćeri ili snahe) kod kuće (27). Pozitivni čimbenici povezani s preuzimanjem uloge njegovatelja su osjećaj ponosa i zadovoljštine; motivi za preuzimanje te uloge su često složeni od mješavine očekivanja i obveze zajedno s ljubavlju i osjećajem zahvalnosti prema osobi s demencijom, ili vraćanje njege koju su primili kao djeca (28). U neformalnoj skrbi, razlozi odabira uloge njegovatelja razlikuju se. Ovdje navodimo četiri glavna razloga. Često je ta uloga nametnuta zbog kulturoloških razloga i tradicije. Na primjer, na Cipru se smatra prirodnom ulogom žene, a sličnog su stava u obiteljima Latinoamerikanaca u Sjedinjenim Američkim Državama (SAD) i Španjolskoj (27-29). Zatim, uloga njegovatelja je kulturološka i tradicijska u multigeneracijskim kućanstvima (Sri Lanka, azijske zemlje). Takva uloga je neupitna i altruistična. Kćeri i snahe su emotivna potpora, podrška u svakodnevnim aktivnostima, sinovi su financijska potpora (30,31). U SAD, u latinoameričkim obiteljima 78 % njegovatelja su kćeri i nevjeste, u kineskim obiteljima 63 %, a u ostalim obiteljima 49 % (32). U Nizozemskoj, u turskim i marokanskim obiteljima najstarija kći ili supruga najstarijeg sina, tradicionalno je njegovatelj (33). Proširena bračna uloga također je razlogom zašto žena preuzima ulogu njegovatelja te na kraju, žena će preuzeti ulogu njegovatelja zbog osjećaja ponosa i zadovoljstva (33). Žene čine najveći udio profesionalne njegovateljske radne snage u skrbi za demenciju te u pružanju formalne zdravstvene i socijalne skrbi i potpore osobi s demencijom i njenom ili njegovom njegovatelju. Mnoge žene koje rade kao njegovateljice skrbe i za svoju djecu i starije roditelje. To djeluje na njihovu sposobnost pružanja obiteljske skrbi i utječe na kvalitetu života cijele obitelji, uključujući i osobe koja živi s demencijom. Razlika u pla-

income live in their own homes. Care for persons with dementia is primarily conducted in the community. In countries with low income this number is much higher although it is not easy to quantify it. Care is usually provided by family members (most often daughters and daughters-in-law) at home (27). Positive factors connected with taking the role of a caregiver are the sense of pride and satisfaction; motives for taking that role are often complicated, from a mixture of expectations and obligations along with love and a sense of thankfulness towards the person with dementia or returning care that they received as children (28). In non-formal care the reasons for choosing the role of a care giver differ and here we state the four main reasons. Often, this role is imposed because of cultural reasons and tradition. For instance, in Cyprus it is considered the natural role of women and the similar attitude is in the families of Latin American descent in USA and Spain (27-29). Furthermore, the role of a caregiver is cultural and traditional in multigenerational households (Sri Lanka, countries of Asia). This role is unquestionable and altruistic. Daughters and daughters-in-law are emotional support and support in everyday activities, while sons are financial support (30,31). In the USA and Latin American families, 78% of caregivers are daughters and daughters-in-law, in Chinese families 63%, and in other families 49% (32). In Dutch, Turkish, and Moroccan families the oldest daughter or wife of the oldest son is traditionally the caregiver (33). Expanded marital role is also the reason why women take the role of caregiver and, finally, women will accept the role of a caregiver because of the sense of pride and satisfaction (33). Women present the majority of professional workers in taking care of people with dementia and in providing formal medical and social care and support to people with dementia and his/her caregiver. Many women who work as caregivers also take care of their children and elderly parents. This influences their ability to provide family care and affects the quality of life of the entire family, including the person ćama između muškaraca i žena koji rade u sustavu zdravstva i socijalne skrbi znači da žene u prosjeku zarađuju 10 % manje od muškaraca koji rade slične poslove (34). Žene čine 42 % radnog pučanstva, a u zdravstvenom sektoru u mnogim zemljama čine 75 % radne snage. Većina ih je zaposlena u skrbi za oboljele od demencije, kako u primarnoj, kućnoj njezi, socijalnoj skrbi, dobrotvornim organizacijama, udruženjima. U Velikoj Britaniji 87 % osoba koje rade u formalnoj skrbi su žene, ¾, su izravno uključene, a ¼ u radu kod privatnih poslodavaca (34).

Među zaposlenicima najveći je postotak imigranata, oko 20 %. Općenito, vrlo su loše educirani o demenciji. Zbog objektivnih i subjektivnih razloga mnogo radnika imigranata koji su 24 sata zaposleni kod oboljelih pate od simptoma depresije. Takav posao nije predviđen za muške njegovatelje (34). U Latinskoj Americi i Kini formalni njegovatelji imaju poprilično nereguliran status, nemaju treninga ni uvježbanih vještina za taj posao (34).

ZDRAVSTVENE TEGOBE NJEGOVATELJA I STRUKTURE POTPORE

Njegovatelji ljudi s demencijom, koji su ujedno i članovi obitelji, skloniji su razvijanju mentalnih zdravstvenih problema poput teške depresivne epizode i anksioznih poremećaja. Žene njegovateljice prijavljuju višu razinu tereta, stresa i simptoma depresije od muških njegovatelja, a rezultati su slični u svim zemljama i okruženjima (3). Njegovatelji-članovi obitelji razvijaju psihičke tegobe poput velikog depresivnog poremećaja i anksioznih poremećaja (16,35). Supruge-njegovateljice puno teže podnose ulogu njegovatelja i taj teret je osobito vidljiv nakon dvije godine brige za oboljelog člana; javljaju se teži distres, gubitak bliskosti, anksiozni i depresivni simptomi, manja je podrška okoline

who lives with dementia. The average difference in wages between men and women who work in the system of health and social care means that women earn 10% less than men who do similar jobs (34). Women make up 42% of workers, and in the health sector in many countries they make up 75% of workers. Most of them are employed in the care of people with dementia in primary, house care, social care, and charity organizations. In Great Britain, 87% of those who work in formal care are women, two thirds are directly included and one third is employed by private employers (34).

Among employees, the highest percentage are immigrants, around 20%. Generally, they are very poorly educated about dementia. Due to objective and subjective reasons, many immigrant workers who spend 24 hours a day with affected individuals suffer from symptoms of depression. This kind of job is not intended for male caregivers (34). In Latin America and China, formal care providers have a rather unregulated status, and do not receive training for this job (34).

HEALTH PROBLEMS OF CARE GIVERS AND STRUCTURES OF SUPPORT

Caregivers of people with dementia who are at the same time family members are more susceptible to developing mental health problems such as major depressive disorder and anxiety disorders. Women caregivers report a higher level of burden, stress, and symptoms of depression compared to male caregivers, and the results are similar in all countries (3). Caregivers who are family members develop mental health problems such as major depressive disorder and anxiety disorders (16,35). Wives who are caregivers tolerate the role of caregiver with much more difficulty, and this burden is especially obvious after two years of care for the affected family member; serious distress, loss of closeness, anxiety, and depressive symptoms

(16,36). Susreću se prvo s gubitkom kontrole, zbunjeno prihvaćaju novu ulogu, kvaliteta braka i bliskost stradavaju, te se moraju naviknuti na nove uloge u kućanstvu. Muškarci supružnici njegovatelji se žale na gubitak kvalitetne komunikacije, kognitivne i bihevioralne simptome, gubitak društva i financijski teret (37). Kćeri-njegovateljice bolje podnose stres njegovanja, imaju također vlastitu ulogu majke, ali više puše, smanjene su im tjelesne aktivnosti, više dobivaju na tjelesnoj težini, krvnom tlaku, a i češće obolijevaju od kroničnih bolesti pluća od majki njegovateljica. Latinoamerikanke bolje podnose stres u odnosu na kineske imigrante te bijelu populaciju u SAD-u (38).

Njegovatelji ljudi s demencijom su često primorani promijeniti svoje zaposlenje. Žene češće od muškaraca moraju reducirati svoje radno vrijeme na polovicu ili potpuno prestati raditi kako bi mogle pružati njegu (34,38).

Putevi njege i strukture potpore koje se nude njegovateljima ljudi s demencijom razlikuju se od zemlje do zemlje, a i unutar pojedine zemlje, ovisno o *setting*-u i lokaciji. U većini zemalja s visokim bruto nacionalnim dohotkom postoje usluge u zajednici koje pomažu ljudima s demencijom, no u zemljama s niskim bruto nacionalnim dohotkom takvih usluga je vrlo malo, pogotovo u ruralnim područjima (39). Tradicionalne strukture proširene obitelji s kulturološkim očekivanjima skrbi za članove obitelji unutar te obitelji opisane su u mnogim zemljama. No, kako se obiteljske strukture mijenjaju zbog razvoda, ponovnog sklapanja braka, opadajuće stope nataliteta, povećane mobilnosti i povećanja zaposlenosti žena, više se za pružanje njege ne može u istoj mjeri oslanjati na tradicionalne strukture (39). Potrebno je pobrinuti se za potrebe ljudi s demencijom i njihovih obiteljskih njegovatelja u ruralnim područjima zemalja s niskim bruto nacionalnim dohotkom, gdje je dostupno manje zdravstvenih i socijal-

occur, and the support from the environment is decreased (16,36). First, they encounter loss of control, they are confused when they accept the new role, the quality of marriage and closeness are impaired, and they have to get used to their new roles in the household. Husbands who are caregivers complain about the loss of quality communication, cognitive and behavioural symptoms, loss of companionship, and financial burden (37). Daughters who are caregivers endure the stress of caretaking better, they also have their own role of being mothers, but smoke more, their physical activities are decreased, they gain more weight, their blood pressure increases, and they more often become ill with chronic pulmonary diseases compared to mothers who are caregivers. Latin Americans endure stress better compared to Chinese immigrants and the Caucasian population in the USA (38).

Caregivers who take care of people with dementia are often forced to change their employment. Women, more often than men, need to reduce their working hours by half or to stop working completely in order to provide care (34,38).

Forms of care and structures of support offered to caregivers of people with dementia are different in different countries and also within particular countries depending on setting and location. In the majority of countries with high income there are services in the community which help people with dementia, but in countries with low income there are very few such services, especially in rural areas (39). Traditional structures of extended family with cultural expectations regarding the care for family members within the family are described in many countries. But along with changes in the family structures because of divorce, marrying again, decreasing birth rate, increased mobility, and an increase in the employment of women, it is not possible to rely on traditional structures in providing care to the same degree (39).

It is necessary to deal with the needs of people with dementia and their caregivers who are famnih usluga i gdje je ostvarivanje zdravstvenih usluga otežano zbog pomanjkanja infrastrukture, lokalne dostupnosti i poteškoća u prijevozu. Žene pružaju znatnu količinu neplaćene njege ljudima s demencijom na svim mjestima. Treba osigurati odgovarajuću potporu kako bi žene mogle nastaviti ulogu njegovatelja, uzimajući u obzir zdravstvene i financijske poteškoće povezane s ulogom njegovatelja (39). Žene je potrebno upoznati s pomoći koja im je dostupna, putem podizanja svijesti i boljeg obavještavanja od organizacija zdravstvene i socijalne skrbi o formalnim i neformalnim uslugama koje postoje i kako ih ostvariti. Sve zdravstvene radnike koji rade u zajednici treba obučiti o demenciji kako bi se povećalo njihovo samopouzdanje u shvaćanju ponašanja ljudi s demencijom i učinak koji to ima na njihove karijere, a kako bi im se omogućilo da pružaju učinkovitu podršku. Nizak ekonomski status, financijske nagrade i nedostatna obuka i podrška za rad u njegovateljskoj struci utječu na žene, njihove obitelji i na ljude koji žive s demencijom. Postoji potreba za stručnim kompetencijama zdravstvenih i njegovateljskih radnika koji rade s ljudima koji žive s demencijom s kompleksnim potrebama i komorbiditetima. Dostupnost socijalne podrške pomaže kod prilagodbe na bolest, dok njena odsutnost dovodi do pogoršanja ishoda skrbi u smislu depresivnosti i njegovateljskog stresa, kako za oboljelu osobu tako i za njegovatelja (20,21). Koji će oblik socijalne podrške pojedinom njegovatelju biti važniji ovisi svakako i o stadiju bolesti, pa će tako instrumentalna podrška biti iznimno značajna u akutnoj fazi bolesti kada su kapaciteti oboljele osobe ograničeni u izvršavanju svakodnevnih aktivnosti. Emocionalna podrška u svim fazama bolesti može također unaprijediti suočavanje s izazovima skrbi (22). Socijalna podrška označava dostupne resurse u socijalnoj okolini koji pridonose dobrobiti njegovatelja i pomažu mu u obnošenju njegove uloge (22,23). Postoji razlika između „povezujuće" podrške i

ily members in rural areas of countries with low income where fewer health and social services are accessible and where the realization of health services is harder because of the lack of infrastructure, local accessibility, and problems in transportation. Women provide a significant amount of unpaid care to people with dementia in all settings. It is necessary to ensure adequate support in order for women to be able to continue with the role of a caregiver, taking into consideration health and financial problems connected with the role of a caregiver (39). It is necessary to inform women about the help that is accessible by raising awareness and providing better information through health and social care organizations about formal and non-formal services and how to realize them. All health workers who work in the community need to be taught about dementia in order to increase their confidence in understanding the behaviour of people with dementia and the effect that it has on their careers in order to enable them to give efficacious support. Low socioeconomic status, financial prizes, and insufficient training and support for working as caregivers affect women, their families, and people who live with dementia. There is a need for professional competences of health workers and caregivers who work with people who live with dementia with complex needs and comorbidities. The accessibility of social support helps in adapting to the illness, while the lack of it leads to a worsening in the outcome of caregiving in the sense of depression and care giver's stress for the affected person and for the caregiver (20,21). Which type of social support will be more important to the particular caregiver depends on the stage of the illness. Instrumental support is very important in the acute phase of illness, when the capacities of the affected person are limited in performing everyday activities. Emotional support in all stages of illness can also improve coping with challenges of caregiving (22). Social support signifies available resources in the social environment that contribute to the wellbeing of the caregiver and help him/her in

„nepovezane“ podrške, koja se temelji na percepciji njegovatelja oboljelih od demencije u primanju pomoći, tj. podrške. „Povezujuća“ podrška označava interakciju koju njegovatelj shvaća kao pomažuću u bavljenju njegovim/njezinim potrebama. „Nepovezana“ podrška označava interakcije/u koja pojačava otuđenost njegovatelja, jer podrška nije u skladu s potrebama koje percipira njegovatelj (25). Njegovatelji s manje socijalne podrške i s nižim stupnjem zadovoljstva primljenom socijalnom podrškom imaju značajno viši stupanj sagorijevanja nego njegovatelji koji socijalnu podršku percipiraju višom i socijalne veze jačima (21). Nadalje, njegovatelji s višom emocionalnom i socijalnom podrškom imaju niži stupanj depresivnosti, te svoju kvalitetu života i zadovoljstvo životom percipiraju višima. Neformalni njegovatelji osoba oboljelih od demencije izvješćuju o višoj razini stresa, psiholoških problema, problema s fizičkim zdravljem, većoj socijalnoj izolaciji te lošijem obiteljskom funkcioniranju od osoba koje nisu u ulozi pružatelja skrbi oboljeloj osobi. Kod njegovatelja koji su pod visokim stresom veća je vjerojatnost pojave depresije, zlostavljanja i zanemarivanja oboljele osobe, te u konačnici institucionalizacije oboljelog. Navedeno može biti posljedica nedostatka emocionalne podrške, socijalne izolacije, ljutnje koja se javlja kod njegovatelja, nemogućnosti nošenja sa zahtjevima bolesti i njegovateljske uloge. Niža razina socijalne podrške povezana je s višim stupnjem sagorijevanja i depresijom njegovatelja, kao i s nižom razinom iskazanog zadovoljstva (22,25,40,41). Druga studija značajnim prediktorima za negativne ishode za njegovatelja navodi razinu prihoda i percepciju zdravstvenog stanja, te manjak socijalne podrške i osjećaja obiteljske napuštenosti (42). Istraživanje Yurtsever i sur. potvrđuje da njegovatelji mlađi od 50 godina, šire socijalne mreže te boljeg obrazovnog statusa iskazuju više zadovoljstva i manje sagorijevanja (43). Andren i Elmståhl (44) su istraživali

performing his/her role (22,23). There is a distinction between “connecting” support and “non-connecting” support, which is based on the perception of caregivers of people with dementia in receiving help, that is, support. “Connecting” support signifies interaction which a caregiver perceives as helping in attending his/her needs. “Non-connecting” support signifies interaction/s which enhances a caregiver’s detachment since the support is not congruent with the need perceived by the caregiver (25). Caregivers with less social support and a lower level of satisfaction with received social support have a significantly higher level of burnout compared to caregivers who perceive a higher level of social support and stronger social connections (21). Furthermore, caregivers with higher emotional and social support have a lower level of depression and their quality of life and satisfaction with life are perceived as higher. Non-formal caregivers of persons with dementia report a higher level of stress, psychological problems, problems with physical health, higher social isolation, and poorer functioning in the family in comparison with persons who do not have the role of caregivers. In caregivers with a high level of stress, the chance for the occurrence of depression, maltreatment, and neglect are higher, and may ultimately lead to the institutionalization of the patient. This can be a consequence of a lack of emotional support, social isolation, care giver’s anger, or the incapacity for coping with the demands of the illness and the role of a caregiver. A lower level of social support is connected with a higher level of burnout and depression of a caregiver, as well as a lower level of reported satisfaction (22,25,40,41). Another research considers the level of income, perception of health condition, lack of social support, and feeling of being abandoned by family as significant predictors for negative outcomes for caregivers (42). The research by Yurtsever et al. confirms that caregivers younger than 50 years of age with a broader social network and a higher level of education report more satisfaction and less burnout (43).

učinak podrške njegovateljima tijekom 5 tjedana stručne podrške i tri mjeseca sudjelovanja u grupama za podršku, te naveli sljedeće pozitivne ishode: povećanje osjećaja zadovoljstva i smanjenje osjećaja napora i razočaranja koji traju minimalno 12 mjeseci od sudjelovanja u programu formalne podrške (44). Budući da članovi obitelji koji brinu o oboljeloj osobi od AB nemaju dostatna saznanja o samoj bolesti i pristupu oboljelom te veći dio vremena provode s oboljelim za pretpostaviti je kako je kod njih veća učestalost anksiozno depresivnih simptoma u odnosu na zdravstvene djelatnike (26,45). Skrb oboljelima pružaju i profesionalci i neprofesionalci, najčešće članovi obitelji. Ponašajni i psihički simptomi u AB povezani su sa stresom i psihičkim simptomima kod osoba koje se skrbe o oboljeloj osobi od AB (45). Obiteljski njegovatelji (najčešće djeca i unuci) osoba oboljelih od AB imaju češće izraženu anksioznost i depresivnost u odnosu na profesionalne njegovatelje; život s oboljelom osobom povećava razinu anksioznosti kod obiteljskih njegovatelja; viša životna dob je rizični čimbenik za nastanak anksioznih i depresivnih simptoma kod obiteljskih njegovatelja; duži radni staž negativno utječe na pojavu anksioznih i depresivnih simptoma, ali ne i razina obrazovanja profesionalnih njegovatelja (srednja, viša ili visoka razina obrazovanja medicinskih sestara/tehničara) (26). Sun i sur. (46) navode da žene njegovateljice rjeđe koriste usluge pomoći u kući, češće koriste usluge prijevoza te podršku iz neformalnih izvora u odnosu na muškarce njegovatelje (46). Wallsten te Sun i sur. nalaze da žene primaju više neformalne podrške od muškaraca (46,47). Pinquart i Sorensen navode da su muškarci motiviraniji i spremniji tražiti pomoć izvana što se povezuje s manjom pripremljenošću i osjećajem ugode u ulozi njegovatelja, odnosno teorijom socijalnih uloga (48). Analize pokazuju i kako je percepcija osjećaja izolacije raširenija kod ekonomski siromašnih (49). Rano prepozna-

Andren and Elmståhl researched the effect of support provided to caregivers during five weeks of professional support and three months of participation in groups for support and stated the following positive outcomes: an increase in the sense of satisfaction and a decrease of the sense of effort and disappointment that last at least 12 months from participation in the program of formal support (44). Since the members of the family that take care of the person with AD don't have sufficient knowledge about the illness and approach to the patient and spend most of the time with the person, it can be assumed that they have a higher frequency of anxiety symptoms compared to health workers (26,45). The care for the affected persons is provided by professionals and non-professionals, most often members of the family. Behavioural mental symptoms in AD are connected with stress and mental symptoms in persons who take care of the person with AD (45). Family caregivers (most often children and grandchildren) of the person with AD have more often expressed anxiety and depressiveness compared to professional caregivers; life with an affected person increases the level of anxiety in family caretakers; older age is a risk factor for the occurrence of anxiety and depressive symptoms in family caregivers; longer occupational record negatively affects the occurrence of anxious and depressive symptoms, but not the level of education of professional caregivers (middle, higher, or high level of education of nurses) (26). Sun et al. state that women caregivers use the services of help in the house more rarely, and use transport services and support for non-formal sources more often when compared to male caregivers (46). Sun et al. and Wallsten find that women receive more non-formal support than men (46,47). Pinquart and Sorensen state that men are more motivated and readier to seek help from outside, which is connected with less preparedness and a sense of comfort in the role of the caregiver, that is, with social roles theory (48). Analyses show that the perception of the sense of isolation is more widespread among the finanvanje emocionalnog stresa kod njegovatelja nužno je kako bi se uspjelo preventivno djelovati (savjetovanje, suportivna psihoterapija, kognitivno-bihevioralni tretman), te spriječiti razvoj ili pogoršanje već postojećih tjelesnih bolesti (npr. kardiovaskularne), odnosno mentalnih poremećaja od kojih su, osim nesanice, najčešći anksioznost i depresivnost (50). Zbog izazova skrbi o oboljeloj osobi većina njegovatelja ima potrebu za dodatnom edukacijom i većom podrškom u lokalnoj zajednici. Kada je njegovateljima podrška dostupna, a prisutna je veća opterećenost zahtjevima dnevne skrbi i niži stupanj sagorijevanja, zadovoljstvo formalnom podrškom je veće (50). Zato je ključno da članovi obitelji i skrbnici razumiju pojedinosti u vezi s promjenama u ponašanju bolesnika s demencijom, te da su educirani kako se nositi s njima. Strategije koje uključuju održavanje pozitivnog konteksta komunikacije, jasnog izražavanja, postavljanja jednoznačnih pitanja, pojednostavljivanja kompleksnih zadataka, te sposobnost odvraćanja pozornosti s negativnih aspekata i preusmjeravanje na trenutne zadatke, omogućuju kvalitetan odnos s bolesnikom, te znatno pridonose kvaliteti života (51). Komunikacija s osobama oboljelima od demencije vremenom postaje otežana, a na kraju se može i gotovo potpuno izgubiti. Već od rane faze bolesti potrebno je raditi na poboljšanju komunikacije. Koristeći se određenim tehnikama njegovatelji mogu poboljšati komunikaciju s oboljelim osobama i zadržati je na toj razini dulje vrijeme. Nefarmakološke intervencije mogu biti od koristi u ublažavanju bihevioralnih poremećaja koji se često javljaju tijekom progresije demencije, a kombinacija nefarmakoloških tehnika i lijekova u pravilu je učinkovitija od primjene samih psihofarmaka (52,53). Alzheimerova demencija je kronična bolest čije razdoblje može obuhvaćati godine njegovateljske skrbi, stoga je važno da podrška njegovateljima bude dostupna od inicijalne sumnje na bolest do njenog kraja, tj.

cially poor (49). Early detection of emotional stress in caregivers is necessary in order to perform preventive actions (counselling, supportive psychotherapy, cognitive-behavioural treatment) and to prevent the development or worsening of already existing somatic illnesses (for example cardiovascular), or mental disorders, among which, beside insomnia, the most frequent ones are anxiety and depression (50). Because of the challenges of caring for the affected person, most caregivers have the need for additional education and more support in the local community. When support is available for care givers and a higher burden of requirements of daily care is present with a lower level of burnout, satisfaction with formal support is higher (50). Therefore, it is crucial that family members and care givers understand the details connected with changes in the behaviour of patients with dementia and be educated to cope with them. Strategies involve the maintenance of a positive context of communication, clear expression, asking clear questions, simplifying complex tasks, and the ability to distract attention from the negative aspects and redirect it to present tasks enable a quality relationship with the affected person and contribute significantly to quality of life (51). Communication with people with dementia becomes more difficult over time and finally can be lost altogether. Since the early stage of the illness, it is necessary to work on the improvement of communication. By using certain techniques, caregivers can improve communication with the patients and maintain it at that level for a longer time. Non-pharmacological interventions can be useful in the alleviation of behavioural disorders which often occur during the progression of dementia, and a combination of non-pharmacological techniques and medications is generally more efficacious then the use of psychopharmaceuticals only (52, 53). AD is a chronic illness the duration of which can include years of caregiving. Therefore, it is important that the support to caregivers is available from the initial doubt regarding the illness until the end of the illness, smrti oboljelog, te i poslije toga u fazi žalovanja odnosno adaptacije na proživljeni gubitak (54).

ZAKLJUČAK

Postoji potreba za daljnjim istraživanjima utjecaja demencije na žene kao njegovateljice u longitudinalnim studijama. Potrebno je napraviti ili poboljšati postojeće nacionalne programe za liječenje demencije te u njima jasnije naglasiti ulogu žena i njihovu specifičnost vezanu za ovaj entitet. Buduća se translacijska istraživanja trebaju seusredotočiti na pitanja kako njegovateljima, a to su poglavito žene, pomoći se prilagodili novonastaloj situaciji, dugoročno se s njom nositi i iz toga izaći zdrav, odnosno sa što manjim posljedicama.

that is, death of the affected person, but also afterwards, during the period of bereavement, that is, adaptation to experienced loss (54).

CONCLUSION

There is a need for further research of the influence of dementia on women as caregivers in longitudinal studies. It is necessary to make or improve existing national programs for the treatment of dementia and to more clearly emphasize the role of women and their specific issues related to this disease. Future translational research needs to focus on questions such as how to help caregivers, who are most often women, to adapt to the new situation, cope with it in the long term, and finally to come out of it healthy or with as few consequences as possible.

LITERATURA / *REFERENCES*

1. World Alzheimer Report 2016 - Improving healthcare for people living with dementia: Coverage, quality and costs now and in the future. London: Alzheimer's Disease International, 2016.
2. Milić Babić M, Laklija M, Rusac S. Neke odrednice zadovoljstva socijalnom podrškom njegovatelja osoba oboljelih od Alzheimerove bolesti. Rev Soc Polit 2014; 21: 201-18.
3. Akpinar B, Küçükgüçlü Ö, Yener G. Effects of gender on burden among caregivers of Alzheimer's patients. J Nurs Scholarsh 2011; 43: 248-54.
4. Mimica N, Presečki P. Alzheimerova bolest – epidemiologija, dijagnosticiranje i standardno farmakološko liječenje. Medix 2012; 101/102: 152-8.
5. Lušić I. Dijagnostika i liječenje Alzheimerove bolesti. Medix 2014; 111: 188-96.
6. Tomek-Roksandić S, Kolarić B, Šostar Z i sur. Zaštita zdravlja starijih osoba u Hrvatskoj – sadašnjost i budućnost. Lijec Vjesn 2016; 138: 17.
7. Mimica N. Demencija i palijativna skrb. Neurol Croat 2011; 60: 119-23.
8. Kušan Jukić M, Mimica N. Palijativna skrb o oboljelima od Alzheimerove bolesti i drugih demencija. Medix 2016; 119/120: 179-83.
9. Hurd MD, Martorell P, Delavande A, Mullen KJ, Langa KM. Monetary costs of dementia in the United States. N Engl J Med 2013; 368: 1326-34.
10. Mimica N, Mladinov M, Šimić G, Dajčić M, Trešćec-Ivičić M. Global Alzheimer's disease charter – Croatian translation. Neurol Croat 2010: 59(Suppl 2): 144.
11. Carretero S, Garcés J, Ródenas F. Evaluation of the home help services and its impact on the informal caregiver's burden of dependent elders. Int J Geriatr Psychiatry 2007; 22: 738-49.
12. Wilks SE. Measures support for Alzheimer's caregivers: Psychometric evaluation of familial and friend support. Res Soc Work Pract 2009; 19: 722-9.
13. Despot Lučanin J. Psihološke intervencije za obitelj oboljele osobe. Zbornik sažetaka - Prva edukativna konferencija o Alzheimerovoj bolesti (EdukAl 2015). Zagreb: Hrvatska udruga za Alzheimerovu bolest, 2015, str. 20.
14. Pearlin LI, Harrington C, Lawton MP, Montgomery RJ, Zarit SH. An overview of the social and behavioral consequences of Alzheimer's disease. Aging Ment Health 2001; 1: S3-6.
15. Despot Lučanin J. Psihološke intervencije za skrbnika i obitelj osobe oboljele od Alzheimerove bolesti. U: Tomek-Roksandić S, Mimica N, Kušan Jukić M (ur). Alzheimerova bolest i druge demencije - rano otkrivanje i zaštita zdravlja. Zagreb: Medicinska naklada, 2017, 248-54.
16. Alzheimer's Association. Alzheimer's disease facts and figures. Alzheimers Dement 2014; 10: e47-92.

17. Calasanti T, Bowen ME. Spousal caregiving and crossing gender boundaries: Maintaining gendered identities. J Aging Stud 2006; 20: 253-63.
18. Thompson C, Briggs M. Support for caregivers of people with Alzheimer's type dementia. Cochrane Db Syst Rev 2002; 2: 400-54.
19. Karlin NJ, Bell PA, Noah JL, Martichuski DK, Knight BL. Assessing Alzheimer's support group participation: A retrospective follow-up. Am J Alzheimers Dis 1999; 14: 326-33.
20. Yee JL, Schultz R. Gender differences in psychiatric morbidity among family caregivers: A review and analysis. Gerontology 2000; 40: 147-64.
21. Wan-Yuen C, Wah-Yun L, Razali K, Poi PJH, Ebenezer E, Prince MJ. Social support and burden among caregivers of patients with dementia in Malaysia. Asia Pac J Public Health 2003; 15: 23-9.
22. Forde OT, Pearlman S. Breakaway. A social supplement to caregivers' support groups. Am J Alzheimers Dis Other Demen1999; 14: 120-4.
23. Sarafino EP. Health psychology: Biopsychosocial interactions. New York: John Wiley & Sons, 2002.
24. Arffman R. Social support promoting coping for caregivers caring of people with Alzheimer's disease. Jyväskylä: Jamk University of Applied Sciences, 2012. https://publications.theseus.fi/bitstream/handle/
25. Wuest J, Erickson PK, Stern ON. Becoming strangers: The changing family care giving relationship in Alzheimer's disease. J Adv Nurs 1996; 20: 437-43.
26. Kovačić Petrović Z, Repovečki S. Učestalost anksioznih i depresivnih simptoma kod obiteljskih i profesionalnih njegovatelja koji skrbe o oboljelima od Alzheimerove bolesti. Soc psihijat 2016; 44: 93-104.
27. Flores YG, Hinton L, Barker JC, Franz CE, Velasquez A. Beyond familism: A case study of the ethics of care of a Latina caregiver of an elderly parent with dementia. Health Care Women Int 2009; 30: 1055-72.
28. Romero-Moreno R, Losada A, Marquez M, i sur. Leisure, gender, and kinship in dementia caregiving: Psychological vulnerability of caregiving daughters with feelings of guilt. J Gerontol B Psychol Sci Soc Sci 2014; 69: 502-13.
29. Papastavrou E, Kalokerinou A, Papacostas SS, Tsangari H, Sourtzi P. Caring for a relative with dementia: family caregiver burden. J Adv Nurs 2007; 58: 446-57.
30. SEARO. Promoting ageing and health – the Sri Lankan experience. Ministries of social services and health. WHO Regional Health Forum 2012; 16(1).
31. Watt MH, Perera B, Ostbye T, Ranabahu S, Rajapakse H, Maselko J. Care-giving expectations and challenges among elders and their adult children in Southern Sri Lanka. Ageing Soc 2014; 34: 838-58.
32. Gray HL, Jimenez DE, Cucciare MA, Tong HQ, Gallagher-Thompson D. Ethnic differences in beliefs regarding Alzheimer disease among dementia family caregivers. Am J Geriatr Psychiatry 2009; 17: 925-33.
33. Wezel N, van Francke AL, Devillé WL, Blom MM, van Grondelle NJ, Kayan-Acun E. Family care for immigrants with dementia: The perspectives of female family carers living in the Netherlands. Dementia 2014; 15: 69-84.
34. World Health Organization. Gender and health workforce statistics WHO Spotlight on statistics, issue 2, 2008. http:// www.who.int/hrh/statistics/spotlight_2.pdf (pristupljeno 9.travnja 2015.).
35. Godfrey JR, Warshaw GA. Toward optimal health: considering the enhanced healthcare needs of women caregivers. J Women Health 2009; 18: 1739-42.
36. Zvěřová M. Frequency of some psychosomatic symptoms in informal caregivers of Alzheimer's disease individuals. Prague's experience. Neuro Endocrino Lett 2012; 33: 565-7.
37. Pretorius C, Walker S, Heyns PM. Sense of coherence amongst male caregivers in dementia: A South African perspective. Dementia 2009; 8: 79-94.
38. Gusi N, Prieto J, Madruga M, García JM, Gonzalez GuerreroJL. Health-related quality of life and fitness of the caregiver of patient with dementia. Med Sci Sports Exerc 2009; 41: 1182-7.
39. Schneider J, Murray J, Banerjee S, Mann A. EUROCARE: a cross-national study of co-resident spouse carers for people with Alzheimer's disease: I-Factors associated with carer burden. Int J Geriat Psychiatry1999; 14: 651-61.
40. Chang BL, Brecht M, Carter PA. Predictors of social support and caregiver outcomes. Women Health 2001; 33: 39-61.
41. Lai DWL, Thomson C. The impact of perceived adequacy of social support on caregiving burden of family caregivers. Families in Society. J Cont Soc Ser 2011; 92: 99-106.
42. Pohl JM, Given CW, Collins CE, Given BA. Social vulnerability and reactions to caregiving in daughters and daughters- in-law caring for disabled aging parents. Health Care Women Int 1994; 15: 385-95.
43. Yurtsever S, Özge A, Kara A, Yandim A, Kalav S, Yeil P. The relationship between care burden and social support in Turkish Alzheimer patients family caregivers: Cross-sectional study. J Nurs Educ Pract 2013; 3: 4040-59.
44. Andren S, Elmståhl S. Psychosocial intervention for family caregivers of people with dementia reduces caregiver's burden: Development and effect after 6 and 12 months. Scan J Caring Sci 2008; 22: 98-109.
45. Tan LL, Wong HB, Allen H. The impact of neuropsychiatric symptoms of dementia on distress in family and professional caregivers in Singapore. Int Psychogeriatr 2005; 17: 253-63.
46. Sun F, Roff LL, Klemmack D, Burgio LD. The influences of gender and religiousness on Alzheimer's caregiver's use of informal support and formal services. J Aging Health 2008; 20: 937-53.
47. Wallsten SS. Effects of caregiving, gender, and race on the health, mutuality, and social supports of older couples. J Aging Health 2000; 12: 90-111.

48. Pinquart M, Sorensen S. Gender difference in caregiver stressor, social resources, and health: An updated meta-analysis. J Gerontol B Psychol Sci Soc Sci 2006; 61: 33-45.
49. Böhnke P. Are the poor socially integrated? The link between poverty and social support in different welfare regimes. J Eur Soc Pol 2008; 18: 133-50.
50. Kušan Jukić M. Emocionalni stres njegovatelja - prevencija i prepoznavanje. Zbornik sažetaka - Prva edukativna konferencija o Alzheimerovoj bolesti (EdukAl 2015). Zagreb: Hrvatska udruga za Alzheimerovu bolest, 2015, str. 28.
51. Borovečki F. Razumijevanje ponašanja osoba s demencijom. Zbornik sažetaka - Prva edukativna konferencija o Alzheimerovoj bolesti (EdukAl 2015). Zagreb: Hrvatska udruga za Alzheimerovu bolest, 2015, str. 22.
52. Mimica N. Komunikacija s osobom oboljelom od demencije. Medix 2011; 17(92 - Suppl 1): 56-8.
53. Mimica N, Kalinić D. Art therapy may be benefitial for reducing stress-related behaviours in people with dementia – case report. Psychiatr Danub 2011; 23: 125-8.
54. Mimica N. Pogovor – O Alzheimeru iznutra. U: Kerepčić Ratkaj Lj. Alzheimer u mojem domu – Obiteljske istinite priče. Zagreb: Hrvatski liječnički zbor, Hrvatsko društvo za Alzheimerovu bolest i psihijatriju starije životne dobi; 2016, str. 182-4.

Tko liječi seksualne probleme u hrvatskom zdravstvenom sustavu?

Who Treats Sexual Problems in Croatian Health System?

Goran Arbanas

Klinička bolnica Vrapče, Zagreb, Sveučilište u Rijeci, Medicinski fakultet, Rijeka, Hrvatska
/ University Hospital Vrapče, Zagreb, University of Rijeka, Faculty of Medicine, Rijeka, Croatia

U Hrvatskoj ne postoji specijalizacija iz seksualne medicine i mali je broj liječnika (nekolicina androloga i psihijatara) koji su educirani u području seksualnog zdravlja. *Cilj* ovog istraživanja je utvrditi tko su specijalisti u hrvatskom zdravstvenom sustavu koji prepoznaju, dijagnosticiraju (i liječe) seksualne probleme i poremećaje. *Metode:* Korišteni su podatci Hrvatskog zavoda za zdravstveno osiguranje. Pretražen je sustav kako bi se utvrdilo koji su seksualni problem dijagnosticirani u jednoj kalendarskoj godini (2013.) u Hrvatskoj i tko su liječnici (koji specijalisti) koji su ih dijagnosticirali. *Rezultati:* Godine 2013. u Hrvatskoj su specijalisti u sekundarnoj zdravstvenoj zaštiti dijagosticirali seksualne poremećaje kod ukupno 288 osobe (239 muškaraca i 49 žena). Najveći broj slučajeva dijagnosticirali su psihijatri, a za njima slijede urolozi. Ginekolozi su dijagnosticirali samo mali broj seksualnih problema. Najčešće dijagnosticirani poremećaji kod muškaraca bili su erektilni poremećaj i poremećaj sa smanjenom seksualnom željom. Liječnici nisu dijagnosticirali ni jedan slučaj dispareunije. *Zaključci*: Specijalisti u Hrvatskoj dijagnosticiraju mnogo više seksualnih problema kod muškaraca, nego kod žena. Potrebno je obratiti više pažnje edukaciji studenata medicine i liječnika kako da prepoznaju i dijagnosticiraju seksualne probleme.

/ In Croatia there is no residency programme in sexual medicine, and there is only a small number of medical doctors (a few andrologists and psychiatrists) who are educated in the area of sexual health. The aim of this study was to identify the specialists in the Croatian health system who recognize and diagnose (and possibly treat) sexual problems and disorders. Data from the Croatian health insurance system was used: the system was retrieved to find out what sexual problems were diagnosed in a single year (2013) in Croatia and by whom (which specialists). Altogether 288 persons (239 men and 49 women) were diagnosed with sexual disorders in 2013 by secondary level specialists in Croatia. Psychiatrists diagnosed the majority of cases, followed by urologists. Gynaecologists diagnosed only a small proportion of sexual problems (or problems related to sexuality). The most commonly diagnosed disorders in men were the erectile disorder and the hypoactive sexual desire disorder. No cases of dyspareunia were recognized by medical doctors. Specialists in Croatia diagnosed more sexual problems in men in comparison to women. More care should be placed on educating medical students and medical doctors on the recognition and diagnosis of sexual problems.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE:*
Doc. dr. sc. Goran Arbanas, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10 000 Zagreb, Hrvatska
Tel: 00385-1-37800629
E-pošta: goran.arbanas@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS:*
Seksualne disfunkcije / *Sexual dysfunctions*
Dijagnosticiranje / *Diagnostics*
Zdravstveni sustav / *Health system*
Seksualna medicine / *Sexual medicine*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.102

UVOD

Mnogo muškaraca i žena ima seksualne probleme/disfunkcije. Istraživanja pokazuju da do jedne četvrtine muškaraca i jedne trećine žena barem jednom u svom životu imaju neki seksualni problem (1-3). Slična je učestalost seksualnih problema utvrđena u nekoliko istraživanja u Hrvatskoj (4-6).

Seksologija uključuje znanstvene discipline, medicinske i nemedicinske specijalnosti, skup terapijskih postupaka, edukacije i intervencija, koje mogu biti medicinske, psihoterapijske i edukacijske (7). Kao posebno područje znanja i prakse pojavila se u drugoj polovici 19. stoljeća (6). U drugoj polovici dvadesetog stoljeća počela se razvijati u nekoliko područja: seksualna medicina, klinička seksologija (seksualna terapija), seksualno zdravlje, seksualna edukacija i seksualna prava (9).

U različitim zemljama seksolozi su različitih primarnih zanimanja: liječnici, psiholozi, medicinske sestre, primalje, socijalni radnici, fizioterapeuti, bračni terapeuti, obiteljski terapeuti, psihoterapeuti. U nekoliko istraživanja pokušalo se utvrditi tko su seksolozi (ili seksualni terapeuti) u različitim europskim zemljama, kao i utvrditi razlike među njima (10-14).

U posljednjih dvadesetak godina postoje pokušaji usklađivanja edukacije i školovanja seksologa širom svijeta (15). Skandinavske su zemlje prve organizirale zajednički program edukacije s međusobnim priznavanjem diploma (16). Godine 2013. održan je prvi ispit iz seksualne medicine (*Fellow of the European Committee for Sexual Medicine* - FECSM), pod pokroviteljstvom Europskog društva za seksualnu medicinu (15,17).

Hrvatska je država na jugoistoku Europe koja se odcijepila od Jugoslavije 1991. g. Većina stanovništva su katolici. Stavovi prema seksualnosti su konzervativni, što pokazuje i referendum o braku održan 2014. g. (većina je glasala da brak bude isključivo zajednica muš-

INTRODUCTION

Many men and women suffer from sexual problems/dysfunctions; studies show that up to one fourth of men and one third of women will have at least one sexual problem during their lifetime (1-3). Similar prevalence of sexual problems has been reported in several studies in Croatia (4-6).

Sexology includes scientific disciplines, medical and non-medical specialties, and a set of therapeutic practices, training, and interventions that may be medical, psychotherapeutic, or educational (7). As a specific field of knowledge and practice, it has appeared in the second half of the 19th century (8). In the second half of the twentieth century it started to develop in several areas: sexual medicine, clinical sexology (sex therapy), sex health, sex education, and sexual rights (9).

In different countries sexologists are of different educational backgrounds: physicians, psychologists, nurses, midwives, social workers, physiotherapists, couple therapists, family counsellors, psychotherapists. Several researchers tried to identify the sexologists (or sexual therapists) in different European countries and to grasp the differences among them (10-14).

In the last twenty years, there has been a tendency to harmonize the education and training of sexologists around the world (15). Nordic countries were the first to establish a joint educational programme with mutual recognition of certificates (16). In 2013 the first exam for the Fellow of the European Committee for Sexual Medicine (FECSM) title was held under the auspices of the European Society for Sexual Medicine (15,17).

Croatia is a south-eastern European country that separated from Yugoslavia in 1991. The majority of the population is Roman Catholic. Attitudes toward sexuality are conservative, shown by the 2014 referendum on the markarca i žene). Seksualna medicina nije uključena u plan i program medicinskih fakulteta. Tek odnedavno postoje izborni kolegiji iz ljudske seksualnosti na medicinskim fakultetima i na studiju psihologije (18).

Godine 2007. prvi su entuzijasti osnovali Hrvatsko društvo za seksualnu terapiju (ponajprije psiholozi, nekoliko psihijatara i jedan sociolog) (18,19). Ovo je društvo organiziralo edukaciju iz seksualne terapije i savjetovanja. Urolozi su organizirali subspecijalnost andrologije i trenutačno je u Hrvatskoj desetak androloga (12). Jedan psihijatar ima titulu EFCSM. Prva ambulanta za seksualnu terapiju osnovana je 2014. g. (20).

Cilj ovog istraživanja bio je utvrditi tko su bili specijalisti u Hrvatskoj koji su liječili ljude sa seksualnim problemima prije 2014. g. i koji su bili najčešći seksualni problemi. Ovo je prvo takvo istraživanje u bivšim komunističkim/socijalističkim zemljama.

METODE

U Hrvatskoj, svi specijalisti koji rade u javnoj službi moraju dijagnosticirati svoje bolesnike u skladu s Međunarodnom klasifikacijom bolesti, 10. izdanje (MKB-10), te ih šifrirati prema odgovarajućim dijagnozama.

Hrvatski zavod za zdravstveno osiguranje (HZZO) prikuplja sve podatke iz svih javnih zdravstvenih ustanova u Hrvatskoj. Svaka osigurana osoba u zemlji ima jedinstvenu šifru, koja je specifična. Također, svaki specijalist ima svoju šifru (broj). Stoga je moguće povezati svakog od pacijenata s odgovarajućim specijalistom i MKB šifrom.

Uz pomoć osoblja iz HZZO-a pretražena je baza podataka u odnosu na sljedeće MKB-10 šifre: F52 seksualne disfunkcije, koje nisu prouzrokovane organskom bolešću ili poremećajem; F64 poremećaji rodnog identiteta; F65 poremećaji seksualne sklonosti i F66 psihološki i bi-

riage (the majority voted for the marriage to be the exclusive union of a man and a woman). Sexual medicine is not represented in medical school curricula. Only recently, elective courses in human sexuality appeared in medical schools and psychology master's degree education (18).

In 2007 the first enthusiasts formed the Croatian Association for Sexual Therapy (mainly psychologists, with a few psychiatrists and a sociologist) (18,19). The Association started education in sexual therapy and counselling. Urologists organized a subspecialty in andrology and currently there are a dozen andrologists in the country (12). One psychiatrist holds the FECSM title. The first outpatient unit for sexual therapy was established in 2014 (20).

The aim of this study was to identify the specialists in Croatia who were treating people with sexual problems prior to 2014 and what the most prevalent sexual problems were. To our knowledge, this is the first such study in Eastern Europe.

METHOD

In Croatia, all the specialists working in the public domain have to diagnose their patients in accordance with the International classification of diseases, 10th revision (ICD-10), and to code the diagnoses accordingly.

The national health insurance company (Croatian Health Insurance Fund – CHIF, HZZO in Croatian) collects all the data from all the public institutions in the country. Each insured person (patient) in the country has a specific code (number), which is specific and unique. Also, each specialist has a specific code (number). Therefore, it is possible to match each patient with a specific specialist and ICD code.

With the help of the ICT staff from CHIF, this database was retrieved for the following ICD-10 codes: F52 sexual dysfunction, not caused hevioralni poremećaji povezani sa seksualnim razvojem i orijentacijom, za 2013. g.

Godine 2014. otvorena je prva ambulanta za liječenje seksualnih problema i budući da u Hrvatskoj ne postoji specifična šifra za seksualnu medicinu, ona je šifrirana pod šifrom psihijatrije. Zbog toga, svi podatci od 2014. g. nadalje bili bi takvi da bi pokazivali veći broj psihijatara i manje drugih specijalista u dijagnosticiranju i liječenju seksualnih problema (jer su pacijenti znali za postojanje ove ambulante i javljali se u nju). Kako je osoblje HZZO-a utvrdilo da nema velikih razlika između ranijih godina u ukupnom broju dijagnosticiranih pacijenata, odabrana je posljednja odgovarajuća godina (2013.).

REZULTATI

Sveukupno, u 2013. g. svi specijalisti zaposleni u javnim zdravstvenim ustanovama dijagnosticirali su bilo koji od seksualnih poremećaja (kategorije F52, F64, F65 i F66 prema MKB-10) kod 288 osoba, 239 muškaraca i 49 žena. Kategorija seksualnih disfunkcija dijagnosticirana je kod 244 osobe (66,3 %), za kojom slijede poremećaji spolnog identiteta (66 - 19,5 %), psihološki i bihevioralni poremećaji povezani sa seksualnim razvojem i orijentacijom (33 - 9,8 %) te poremećaji seksualne sklonosti (15 - 4,4 %).

Postoje značajne razlike u spolnoj raspodjeli ovih četiriju skupina poremećaja (χ^2= 126; p<0,001) (tablica 1) pri čemu su seksualne disfunkcije (F52) bile najčešće dijagosticirana kategorija kod muškaraca, a poremećaji rodnog identiteta (F64) kod (bioloških) žena.

TABLE 1. The gender distribution of sex-related disorders

	men	women
F52	215 (79.9%)	9 (13.0%)
F64	24 (8.9%)	42 (60.9%)
F65	12 (4.5%)	3 (4.3%)
F66	18 (6.7%)	15 (21.7%)

by organic disorder or disease; F64 gender identity disorders; F65 disorders of sexual preference; and F66 psychological and behavioural disorders associated with sexual development and orientation in 2013.

In 2014 the first outpatient clinic for sexual problems was established, and since there is no specific code for sexual medicine in Croatia, it was coded under the “psychiatry” code. Therefore, all the data after 2014 would be skewed and biased toward showing more psychiatrists and less other specialists diagnosing and treating sexual problems (as patients were aware of the existence of this clinic and sought help there). Since the ICT staff from CHIF found that there were no big differences from one year to another in the total number of diagnosed patients, the most recent appropriate year was chosen (2013).

RESULTS

Altogether, in 2013 all the specialists working in the public domain diagnosed any of the sex related disorders (categories F52, F64, F65, and F66 in ICD-10) in 288 persons, 239 men and 49 women. Specifically, sexual dysfunction category was diagnosed in 224 people (66.3%), followed by gender identity disorders (66, 19.5%), psychological and behavioural disorders associated with sexual development and orientation (33, 9.8%) and disorders of sexual preference (15, 4.4%).

There is a significant difference in gender distribution of these four groups of disorders (χ^2= 126; p<0.001) (Table 1), with sexual dysfunction (F52) category being the most diagnosed group of disorders in men, and gender identity disorders (F64) in born women.

The distribution of specific sexual dysfunctions in men is shown in Figure 1 (women were excluded from the Figure, since there were only nine women diagnosed with a diagnosis of any

Raspodjela specifičnih seksualnih disfunkcija kod muškaraca prikazana je na slici 1 (žene su isključene iz ove slike, jer je samo devet žena dobilo dijagnozu neke od seksualnih disfunkcija). Najčešće je postavljena dijagnoza F52 bez navođenja točne disfunkcije (ovo nije prikazano na slici 1). Od specifičnih disfunkcija, najčešće dijagnosticirana bila je erektilna disfunkcija (48,6 %), koju slijedi poremećaj sa smanjenjem seksualne želje (31,9 %). Ni jedan od pacijenata nije dobio dijagnozu pretjeranog seksualnog nagona i dispareunije.

Od parafilija, kod žena je dijagnosticiran jedan slučaj fetišizma, dok je kod muškaraca dijagnosticirano tri slučaja ekshibicionizma, jedan slučaj pedofilije i jedan slučaj višestrukog poremećaja seksualnih sklonosti. I u ovoj kategoriji, 9 od 15 slučajeva parafilija dijagnosticirano je općom šifrom F65, bez navođenja o kojoj se parafiliji radi.

Slike 2 i 3 prikazuju koji su specijalisti dijagnosticirali seksualne probleme kod muškaraca i žena.

Od seksualnih disfunkcija, od ukupno 291 slučajeva, 100 su dijagnosticirali psihijatri, 67

sexual dysfunction). The most prevalent diagnosis was F52 without specifying the exact dysfunction (this was not shown in the Figure). Of the specific dysfunctions, the most prevalent was erectile dysfunction (48.6%), followed by hypoactive sexual desire disorder (31.9%). None of the patients were diagnosed with excessive sexual drive or dyspareunia.

Of paraphilias, one case of fetishism was diagnosed in women, while three cases of exhibitionism, one case of paedophilia and one case of multiple disorders of sexual preference were diagnosed in men. Again, nine out of 15 cases of paraphilias were diagnosed with a non-specific code F65, without specifying which of the paraphilia it was.

Figures 2 and 3 show which specialists diagnosed sexual problems in men and women.

Among the sexual dysfunctions, of 219 cases 100 were diagnosed by psychiatrists, 67 by urologists, 17 by internal medicine specialists, 3 by gynaecologists. Of all the cases of erectile dysfunction (35), 50% were diagnosed by psychiatrists, and 30% by urologists. Among the cases of hypoactive sexual desire disorder (24)

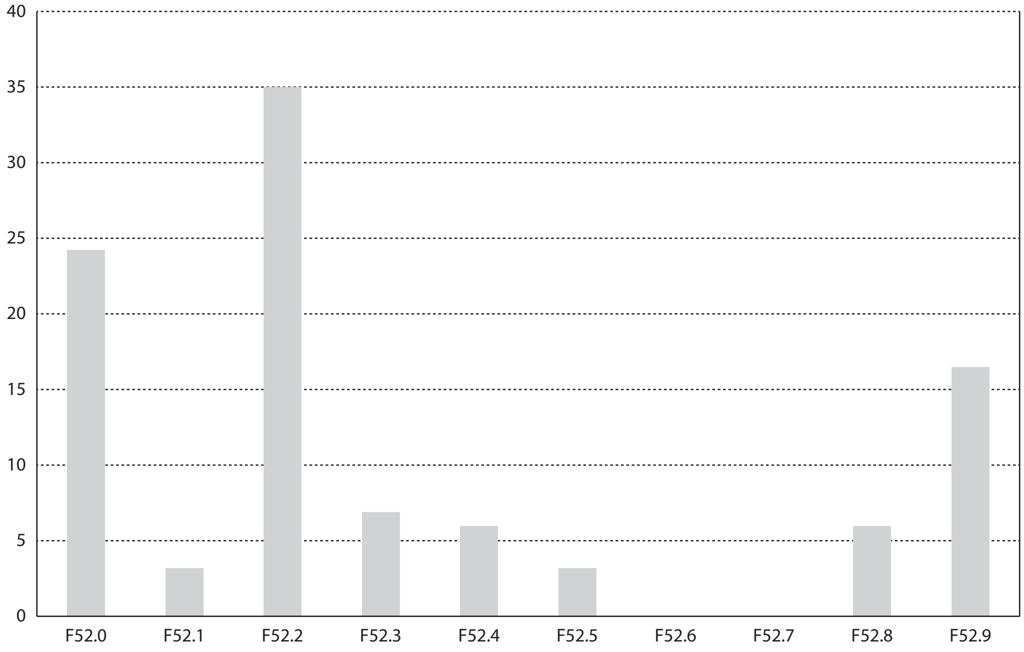


FIGURE 1. Distribution of different sexual dysfunctions in men

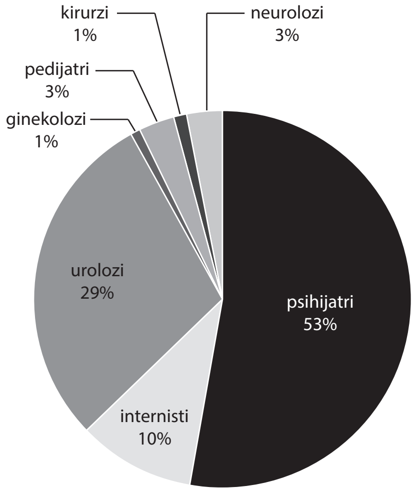


FIGURE 2. Specialists who diagnosed sexual problems in men

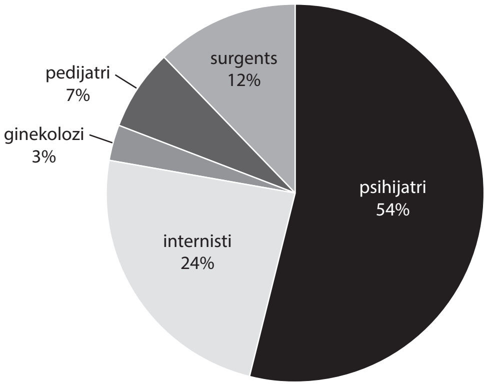


FIGURE 3. Specialists who diagnosed sexual problems in women

urolozi, 17 specijalisti interne medicine, 3 ginekolozi. Od svih slučajeva erektilne disfunkcije (35), 50 % su dijagnosticirali psihijatri, a 30 % urolozi. Od slučajeva poremećaja sa smanjenom seksualnom željom (24) 40 % su dijagnosticirali psihijatri, a 30 % urolozi.

Od slučajeva rodne disforije, 61 % su dijagnosticirali psihijatri, 38 % specijalisti interne medicine, 3 % ginekolozi. Sve slučajeve parafilija dijagnosticirali su psihijatri.

Psihijatri su dijagnosticirali većinu slučajeva svih dijagnostičkih kategorija, osim sljedeće četiri: urolozi su dijagnosticirali više slučajeva smetnji orgazma (F52.3), prijevremene ejakulacije (F52.4) i neodređene seksualne smetnje (F52.9); dok su internisti dijagnosticirali najveći broj slučajeva transseksualnosti (F64.0).

RASPRAVA

Premda su ranija istraživanja pokazala da je prevalencija seksualnih disfunkcija kod muškaraca i žena u Hrvatskoj slična onoj u drugim zemljama širom svijeta te pokazuje visoke vrijednosti (otprilike 30 % žena i 20 % muškaraca) (4-6), samo malom broju ovih ljudi se prepozna/dijagnosticira neka od seksualnih disfunkcija/poremećaja vezanih uz seksualnost. Naši

40% were diagnosed by psychiatrists, and 30% by urologists.

Of the gender dysphoria cases, 61% were diagnosed by psychiatrists, 38% by internal medicine specialists, 3% by gynaecologists. All the cases of paraphilias were diagnosed by psychiatrists.

Psychiatrists diagnosed the majority of cases of all the diagnoses except four: urologists diagnosed more cases of orgasmic dysfunctions (F52.3), premature ejaculation (F52.4), and unspecified sexual dysfunction (F52.9), while internal medicine specialists diagnosed the largest number of cases of transsexualism (F64.0).

DISCUSSION

Although earlier research showed that the prevalence of sexual dysfunctions in men and women in Croatia is the same as in other countries around the world, and is quite high (roughly 30% of women and 20% of men) (4-6), only a small percentage of these people is diagnosed with a sexual dysfunction/sex related disorder. Our data cannot clarify whether people with sexual problems in Croatia do not consult their doctors, whether doctors do not diagnose these disorders, or whether patients podatci ne mogu odgovoriti na pitanje ne savjetuju li se ljudi sa seksualnim problemima u Hrvatskoj s liječnicima, ne dijagnosticiraju li liječnici ove poremećaje ili se pacijenti javljaju isključivo privatnicima. Prema našem mišljenju najvjerojatnije se radi o tome da ljudi ne traže pomoć stručnjaka. Tijekom pripremanja ovog istraživanja autor je kontaktirao privatnike koji se javno reklamiraju kao seksualni terapeuti, no svi oni zajedno imali su tijekom 2013. g. svega desetak pacijenata, te budući da je ovaj broj ovako nizak, a privatnici ne daju MKB-10 šifre redovito, odlučeno je da se ovi pacijenti isključe iz statističke analize. Dakle, čini se da ljudi u Hrvatskoj koji imaju seksualne probleme pokušavaju ih sami riješiti i ne prepoznaju liječnike kao one stručnjake koji bi im mogli pomoći. Malo je vjerojatno da specijalisti kojima bi se ljudi javili zbog seksualnog problema ne bi dijagnosticirali taj problem. Ovo nije tako samo u Hrvatskoj, jer velik broj istraživanja pokazuje da samo mali broj ljudi sa seksualnim problemima traži pomoć liječnika (npr. samo 2 % ljudi u Koreji do oko 10 % muškaraca i 20 % žena u zapadnoj i sjevernoj Europi) (21,22).

Drugi iznenađujući rezultat bio je da većina ljudi kojima se dijagnosticira neki seksualni problem su muškarci. No, ovakav je rezultat u skladu s drugim istraživanjima koji pokazuju da muškarci češće traže pomoć za svoje seksualne probleme nego žene pri čemu se udio muškaraca među pacijentima klinika za seksualno zdravlje kreće oko 75 % (13,23,24). Moguće je da seksualni problem imaju veći negativni učinak na život muškaraca, nego žena, vjerojatno zbog toga što seksualna aktivnost i funkcioniranje imaju veće značenje za mušku spolnu ulogu, nego što ima za žensku. Također, u tradicionalnom društvu, kao što je hrvatsko, veća je sramota i više je socijalno nepoželjno za ženu da traži pomoć. S druge strane, mali broj liječnika koji su dijagnosticirali seksualne probleme može biti posljedica činjenice da ni jedan od medicinskih fakulteta u Hrvatskoj ne podučava studente u

go to private practitioners exclusively. In our opinion, the most likely scenario is that they do not consult a professional. During the preparation of this research, the author had contacted private practitioners who publicly advertised themselves as sexual therapists, but all of them had only a dozen patients in 2013, and since this number is so small and the private practitioners do not regularly give ICD-10 codes, we decided to exclude these patients from our statistical analysis. So, it seems that people in Croatia who have sexual problems rely on their own strengths and do not recognize physicians as a group of professionals who could help them. It is unlikely that specialists who would be consulted for a sexual problem would not diagnose that problem. This is not a Croatian specificity, since a lot of research shows that only the minority of people with sexual problems contact a medical professional (e.g. only 2% of people in Korea to up to around 10% of men and 20% of women in western and northern Europe) (21,22).

The other striking result is that the majority of the people diagnosed with sexual problems were men. But, this finding is in accordance with other research showing that men seek help for their sexual problems more often than women, with a ratio of men among the patients in sex health clinics being around 75% (13,23,24). It is possible that sexual problems have a greater negative impact on men's lives than on women's, probably due to the greater importance that sexual activity and fitness have for the masculine sex role than for the feminine role. Also, in a traditional society, such as Croatian, it is more embarrassing and socially inappropriate for a woman to ask for help. On the other hand, the small number of physicians diagnosing sexual problems could be due to the fact that none of the medical schools in Croatia have sexual problems in their curriculum, and sexual problems are not taught during residency programmes.

području seksualnog zdravlja, a seksualni poremećaji se ne obrađuju ni tijekom specijalizacije.

Jedina kategorija stanja vezanih uz seksualnost (u širem smislu) koja je češće dijagnosticirana kod žena, bila je rodna disforija (poremećaj spolnog identiteta u MKB), te je u Hrvatskoj dijagnosticirano više bioloških žena (transmuškaraca). Neka ranija istraživanja također su našla da je u hrvatskom zdravstvenom sustavu prevalencija transmuškaraca viša od prevalencije transžena (25). Premda je položaj rodne disforije u dijagnostičkim sustavima pitanje o kojem se posljednjih godina mnogo raspravlja, brojni autori ju i dalje smatraju poremećajem, te ona i nadalje ima svoju MKB šifru.

Nažalost, većina liječnika koji su dijagnosticirali neki od poremećaja vezanih uz seksualnost, koristili su široku, nespecifičnu, nadređenu šifru, bez četvrtog znaka. Ovo je vjerojatno posljedica nedostatka vremena (svaki liječnik na kraju pregleda mora postaviti neku dijagnozu, ali da bi bio brži, može samo napisati neku opću šifru, bez traženja specifične dijagnostičke šifre). Među navedenim disfunkcijama kod muškaraca najčešće je bila dijagnosticirana erektilna disfunkcija (ED), a zatim nedostatak ili gubitak seksualne želje. To što je ED bila najčešća seksualna disfunkcija u kliničkim uvjetima nije iznenađujuće, no odsutnost prijevremene ejakulacije jest. Istraživanja iz drugih zemalja pokazuju da su najčešći razlozi javljanja stručnjaku za seksualnu medicinu kod muškaraca erektilna disfunkcija i prijevremena ejakulacija (PE) (prijevremena ejakulacija dijagnosticira se kod 65 % pacijenata klinika za seksualne smetnje u nekim istraživanjima) (11,13,14,24,26,27). Moguće je da je među onima s općom šifrom F52 bilo mnogo više ljudi s PE nego s ED, no u to ne možemo biti sigurni. Također je moguće da mnogi liječnici znaju za dijagnostičku šifru za ED (F52.2), ali ne i za šifru za PE (F52.4), što može biti posebno točno za urologe, jer su seksualni problemi klasificirani među duševnim poremećajima, a ne među urološkim poremećajima.

The only category of sex-related conditions (in a broader sense) that was more frequently diagnosed in women was the gender dysphoria (gender identity disorder in ICD) category, with more biological women (trans men) diagnosed in our country. Some earlier research also found that in the Croatian health system the prevalence of trans men is greater than the prevalence of trans women (25). Although the position of gender dysphoria in diagnostic systems has been under a lot of debate, and many authors do not consider it a disorder, it still has its ICD code.

Unfortunately, the majority of physicians who diagnosed any of the sex-related disorders/conditions used a broad, non-specific code without the fourth digit. This is probably due to time constraints (every physician has to give a diagnosis at the end of a session with a patient, but to be quicker, they might just write the general code, not looking for the specific diagnostic code). Among the specified dysfunctions in men, erectile dysfunction (ED) was most often diagnosed, followed by hypoactive sexual desire. ED being the most prevalent dysfunction in clinical setting is not a surprise, but the lack of premature ejaculation is. Research from other countries showed that the most prevalent presenting problems in men contacting a sexual specialist were erectile disorder and premature ejaculation (PE) (premature ejaculation was diagnosed in up to 65% of attendants of sex clinics in some research) (11,13,14,17,24,26,27). It is possible that among those with the general code of F52, there were more people with PE than with ED, but we cannot be sure. It is also possible that many of the doctors are familiar with the diagnostic code for ED (F52.2), but not for PE (F52.4); this can be especially true for urologists, since sexual problems are classified among mental disorders, and not urological disorders.

It is worth noting that the diagnoses of hypersexuality and pain disorders, but also of sexual

Važno je napomenuti da dijagnoze hiperseksualnosti i bolnih poremećaja, te seksualne averzije i vaginizma nisu zabilježene.

Psihijatri su dijagnosticirali većinu seksualnih problema kod muškaraca i žena. Budući da su sve ove dijagnoze u MKB-10 navedene pod poglavljem F – duševni poremećaji, to nije iznenađujuće. No, odsutnost ginekologa koji bi dijagnosticirali seksualne probleme kod žena veliko je iznenađenje. Očekivali bismo da ginekolozi imaju priliku razgovarati o seksualnosti sa svojim pacijenticama. Specijalisti interne medicine i kirurzi dijagnosticirali su velik udio ženskih seksualnih problema/stanja u ovom istraživanju, no smatramo da je tome tako samo zbog toga što je ukupno dijagnosticirano samo devet slučajeva seksualnih disfunkcija, većina slučajeva bili su poremećaji spolnog identiteta, a osobe koje ulaze u hormonsku ili kiruršku tranziciju moraju kontaktirati internista i kirurga. Mogući razlog za odsutnost ginekologa može biti činjenica da su u ovo istraživanje bili uključeni samo ginekolozi koji rade na sekundarnoj razini (tj. u bolnici). U Hrvatskoj, većina ginekologa su liječnici primarnog kontakta i žene ne trebaju uputnicu svoga liječnika obiteljske medicine da bi došle do ginekologa (za razliku od svih drugih specijalista) pa zbog toga nismo mogli prikupiti podatke o ovim primarnim ginekolozima. Moguće je da su mnogi od primarnih ginekologa dijagnosticirali neki od seksualnih poremećaja.

ZAKLJUČCI

Hrvatski liječnici – specijalisti imaju slabu ili nikakvu edukaciju u seksualnoj medicine pa su im zbog toga manje poznati načini prepoznavanja i dijagnosticiranja seksualnih disfunkcija i srodnih stanja navedenih u MKB-10 i DSM-5. Među onima koji dijagnosticiraju ova stanja, oni ne navode specifične šifre/dijagnoze. Ginekolozi koji rade u sekundarnoj razini zdravstvene zaštite dijagnosticirali su mali broj

aversion and vaginismus, were almost non-existent.

Psychiatrists diagnosed the majority of sexual problems in both men and women. Since all of these diagnoses are in ICD 10 under the heading F – mental disorders, this is not a surprise. But, the lack of gynaecologists diagnosing sexual problems in women is a big surprise. We would expect gynaecologists to have the opportunity to talk about sexuality with their patients. Internal medicine specialists and surgeons diagnosing female sexual problems/conditions make a significant proportion of physicians in this research, but we think this is because in women only nine cases of sexual dysfunctions were diagnosed, and the majority of cases were gender identity disorders, and in patients who ask for a hormonal or surgical transition, internists and surgeons are involved. The possible reason for a lack of gynaecologists is the fact that in this research only gynaecologists working at a secondary level (i.e. in hospitals) were included. The majority of gynaecologists are primary level physicians in Croatia, and a woman does not need a referral letter from her general practitioner to contact a gynaecologist (which is contrary to all the other specialists) and therefore we were not able to collect data from these primary care gynaecologists. It is possible that many of the primary gynaecologists diagnosed some of the sexual problems.

CONCLUSION

Croatian physicians – specialists receive limited or no training and are therefore less proficient than their peers at recognising and diagnosing sexual dysfunctions and similar conditions listed in the ICD-10 or DSM-5. Among those who do diagnose these conditions, they are not specific in recording the appropriate diagnosis. Gynaecologists working at the secondary level diagnosed only a few sexual problems seksualnih problema kod žena. U Hrvatskoj su potrebne promjene plana i programa medicinskih fakulteta i programa cjeloživotne liječničke edukacije kako bi se uključile teme seksualnih pitanja, tehnika kako razgovarati s pacijentima o seksualnosti, kako prepoznati, dijagnosticirati i liječiti seksualne poremećaje. Također, potrebno je obratiti više pažnje kako bi liječnici bili precizniji u dijagnosticiranju različitih poremećaja, umjesto da daju opće, nespecifične šifre široke dijagnostičke skupine.

in women. Croatia needs changes in medical school curricula and continuous medical education programmes to include topics that will rise awareness of physicians on sexual matters, techniques how to talk with patients about sexuality, and how to recognise, diagnose, and treat sexual disorders. Also, more attention should be paid to influencing physicians to be more specific in diagnosing different disorders, instead of just giving a code for a broad diagnostic group.

LITERATURA / *REFERENCES*

1. Nicolosi A, Laumann EO, Glasser DB, Moreira ED Jr, Paik A, Gingell C. Global study of sexual attitudes and behaviours investigators' group. Sexual behaviour and sexual dysfunctions after age 40: the global study of sexual attitudes and behaviours. Urology 2004; 64: 991-7. doi: 10.1016/j.urology.2004.06.055.
2. Nicolosi A, Laumann EO, Glasser DB, Brock G, King R, Gingell C. Sexual activity, sexual disorders and associated help-seeking behaviour among mature adults in five Anglophone countries from the Global survey of sexual attitudes and behaviors (GSSAB). J Sex Marital Ther 2006; 32: 331-42. doi: 10.1080/00926230600666369.
3. Hayes RD, Dennerstein L, Bennett CM, Fairley CK. What is the true prevalence of female sexual dysfunctions and does the way we assess these conditions have an impact? J Sex Med 2008; 8: 777-87. doi: 10.1111/j.1743-6109.2007.00678.
4. Štulhofer A, Bajić Ž. Prevalence of erectile and ejaculatory difficulties among men in Croatia. Croat Med J 2006; 47: 114-24. PMC2080357.
5. Štulhofer A, Gregurović M, Galić I, Pikić A. Prevalence of female sexual difficulties in a metropolitan setting. Medicina 2005; 42(41): 300-9.
6. Štulhofer A, Gregurović M, Pikić A, Galić I. Sexual problems of urban women in Croatia: prevalence and correlates in a community sample. Croat Med J 2005; 46(1): 45-51.
7. Haeberle E, Gindorf R. Sexology today: a brief introduction. Berlin: DGSS, 1993.
8. Giami A & Russo J. The diversity of sexologies in Latin America: emergence, development, and diversification. Int J Sex Health. 2013;25:1-12. doi:10.1080/19317611.2012.760507
9. Hall KSK & Graham CY. The cultural context of sexual pleasure and problems: psychotherapy with diverse clients. Routledge, New York and London, 2013.
10. Alarcao V, Beato A, Almeida J, Machado FL, Giami A. Sexology in Portugal: narratives by Portuguese sexologists. J Sex Res 2015; 18: 1-14. 409:10.1080/00224499.2015.1104286.
11. Almas CB, Almas E, Karlsen TI, Giami A. Sexology in Norway in 2001 and 2011: a comparative and cross-sectional study. Sexologies 2014: 213: e9-e17. doi:10.1016/j.sexol.2013.12.002.
12. Arbanas G, Jurin T, Mozetič V, Mimica Matanović S, Rožman J, Markić D *et al*. Prve hrvatske smjernice za dijagnostiku, liječenje i praćenje osoba s prijevremenom ejakulacijom. Lijec Vjesn 2016; 138: 321-7.
13. Giami A, de Colomby P. Sexology as a profession in France. Arch Sex Behav 2003; 32(4): 371-9. PMID: 12856898.
14. Wylie KR, De Colomby P, Giami AJ. Sexology as a profession in the United Kindgdom. Int J Clin Pract 2004; 58(8): 764-8. PMID:15372849.
15. Reisman Y, Eardley I & Porst H. New developments in education and training in sexual medicine. J Sex Med 2013;10:918-923. doi:10.1111/jsm.12140
16. Kontula O. An essential component in promoting sexual health in Europe is training in sexology. Int J Sex Health 2011; 23: 168-180. doi:10.1080/19317611.2011.592932.
17. Arbanas G, Reisman Y, Andrews S. The sociocultural aspects, professional characteristics, and motivational factors of the first fellows of the European committee of sexual medicine. J Sex Med 2015; 12: 1368-74. doi:10.1111/jsm.12900.
18. Arbanas G, Knez R, Barolin N, Štulhofer A. Hrvatsko društvo za seksualnu terapiju i uvjeti za stjecanje diplome seksualnog terapeuta. Medicina 2007; 43: 311-12.
19. Knez R, Štulhofer A. Seksualna terapija. In: Kozarić Kovačić D, Frančišković T. Psihoterapijski pravci. Zagreb: Medicinska naklada, 2014.
20. Cazin K, Rožman J. Otvorenje prve ambulante za liječenje seksualnih poremećaja u Hrvatskoj – Opća bolnica Karlovac. Sestrinski glasnik 2015; 20(1): 75-6.
21. Clegg M, Pye J, Wylie KR. Undergraduate training in human sexuality – evaluation of the impact on medical doctors' practice ten years after graduation. Sex Med 2016: e1-e11. doi:10.1016/J.esxm.2016.04.004.

22. Parish S, Dean J, Dabees K, Rubio-Aurioles E, Tiefer N. Ethical, socio-cultural and educational aspects of sexual medicine. In: Montorsi F, Basson R, Adaikan G, Becher E, Clayton A, Giuliano F *et al*. Sexual medicine sexual dysfunctions in men and women. Paris: 3rd International Consultation on Sexual Medicine, 2010.
23. Fugl-Meyer KS, Giami A. Swedish clinical sexologists. Who are they? Who do they treat? Sexologies 2006; 15: 14-21.
24. Sawleshwarkar S, Kakar SR, Jones R, Lagios K, Mindel A, Hillman RJ. Indian-born patients attending a sexual health clinic in Australia have differing characteristics to their Australian-born counterparts. Intern Med J 2013; 43(12): 1327-30. doi:10.1111/imj.12299 PMID: 15726676.
25. Jokić-Begić N, Čikeš AB, Jurin T, Lučev E, Markanović D, Ručević S. Transsexuality: living in a wrong body? (in Croatian) Lijec Vjesn 2008; 130(9-10): 237-247. PMID:19062760.
26. Metz ME, Seifert MH. Men's expectations of physicians in sexual health concerns. J Sex Marital Ther 1990; 16(2): 79-88. doi:10.1080/00926239008405254.
27. Nobre PJ, Pinto-Gouveia J, Gomes FA. Prevalence and comorbidity of sexual dysfunctions in a Portuguese clinical sample. J Sex Marital Ther 2006; 32: 173-82. doi:10.1080/00926230500-442334.

Landau-Kleffnerov sindrom – prikaz bolesnika
/ *Landau-Kleffner Syndrome – Case Report*

Stanislav Rogulja[1], Marina Bježančević[1], Petra Horvat[1],
Katarina Dodig-Ćurković[1,2,3]

[1]Klinički bolnički centar Osijek, Zavod za dječju i adolescentnu psihijatriju, Osijek, Hrvatska, [2]Sveučilište Josipa Jurja Strossmayera u Osijeku, Medicinski fakultet, Osijek, Hrvatska, [3]Fakultet za dentalnu medicinu i zdravstvo, Osijek, Hrvatska

[1]*Department of Child and Adolescent Psychiatry, Clinical Hospital Center Osijek, Croatia,* [2]*Faculty of Medicine Osijek, Josip Juraj Strossmayer University of Osijek, Croatia,* [3]*Faculty for Dental Medicine and Health, Osijek, Croatia*

Landau-Kleffnerov sindrom je epileptički sindrom dječje dobi i sinonim je za stečenu epileptičku afaziju. Od 1957. godine kada su Landau i Kleffner opisali šestero djece s ovim stanjem do danas opisano je više od 350 djece širom svijeta s tim sindromom. Specifičnost Landau-Kleffnerovog sindroma je akutni gubitak govora i jezika u djeteta koje se do tada govorno normalno razvijalo te globalna regresija ponašanja. Rijetkost susretanja s ovim sindromom čini ga iznimno zahtjevnim za dijagnosticiranje. Potrebna je multidisciplinska obrada stručnjaka iz područja pedijatrije, neuropedijatrije, dječje psihijatrije, psihologije, logopedije, otorinolaringologije, neuroslikovnog prikaza mozga. Konačna dijagnoza postavlja se na temelju specifično epileptogeno promijenjenog nalaza EEG-a u spavanju uz uredan nalaz MR mozga, zajedno s kliničkim manifestacijama sindroma. U ovom radu opisani su prikazom bolesnika multidisciplinska obrada, započinjanje tretmana i prije samog postavljanja dijagnoze, uspostavljanje dijagnoze, daljnji tijek bolesti i liječenje.

/ Landau-Kleffner syndrome is an epileptic childhood syndrome and is synonymous with acquired epileptic aphasia. Since 1957, when Landau and Kleffner identified six children with the disorder, more than 350 cases worldwide have been reported. The specificity of Landau Kleffner syndrome is an acute loss of speech and language in a child who developed normal language and global regression of behaviour. The rarity of this syndrome makes it extremely demanding to diagnose. It requires a multidisciplinary treatment by specialists in the field of pediatrics, neuropediatrics, child psychiatry, psychology, logopedia, otorhinolaryngology, and brain imaging. The final diagnosis is based on an epileptogenically altered EEG finding during sleep with an orderly brain MRI finding, along with clinical manifestations of the syndrome. This paper describes a multidisciplinary treatment, early initiation of treatment, and further course of illness.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Prof. dr. sc. prim. Katarina Dodig-Ćurković, dr. med.
Zavod za dječju i adolescentnu psihijatriju
Klinički bolnički centar Osijek
Medicinski fakultet Osijek
Tel: 031 211 750; faks: 031 211 750
E-pošta: katarina5dodig@gmail.com

KLJUČNE RIJEČI / *KEY WORDS:*
Landau-Kleffnerov sindrom / *Landau-Kleffner syndrome*
Stečena epileptička afazija / *Acquired epileptic aphasia*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.113

UVOD

Definicija

Landau-Kleffnerov sindrom (LKS) je epileptički sindrom dječje dobi karakteriziran stečenom afazijom i epileptiformnim elektroencefalografskim (EEG) abnormalnostima tijekom spavanja. Klasificiran je među epileptičke encefalopatije i smatra se dijelom spektra idiopatskih fokalnih epilepsija. U sklopu sindroma nastupa i globalna regresija ponašanja, a karakteristično je da mu u većini slučajeva prethodi do tada normalan razvoj djeteta (1).

Etiologija

Etiologija Landau-Kleffnerovog sindroma nije poznata, ali se pretpostavlja kako je sindrom završni zajednički put višestrukih etioloških faktora, kao što su genetski i epigenetski faktori (studije blizanaca) te utjecaj okoliša. U 5-20 % obiteljskih i sporadičnih slučajeva LKS-a dokazana je mutacija GRIN2A, a etiologija poremećaja kod preostalih pacijenata ostaje nejasna (2). Druga stanja povezana s mogućom etiologijom LKS-a uključuju progresivni encefalitis, akutni diseminirani encefalomijelitis, toksoplazmozu, tumore temporalnog režnja i upalni encefalitički proces (3).

Epidemiologija

Godine 1957. Landau i Kleffner opisali su šestero djece s ovim stanjem. Od tada je više od 350 djece širom svijeta dijagnosticirano kao LKS. Procjenjuje se da je dob početka bolesti u rasponu od 2 do 8 godina, s vrhuncem između 5 i 7 godina. U rjeđim slučajevima zabilježen je i početak s 18-22 mjeseci te s 13-14 godina. Dječaci su dvostruko češće pogođeni od djevojčica (4,5).

Klinička slika

Landau-Kleffnerov sindrom je stanje s akutnim ili subakutnim gubitkom govora i jezika te globalnom regresijom ponašanja. Nakon što

INTRODUCTION

Definition

Landau-Kleffner syndrome (LKS) is an epileptic syndrome in children that is marked by acquired aphasia and epileptic electroencephalographic (EEG) abnormalities during sleep. It is defined as an epileptic encephalopathy and considered to be part of idiopathic focal epilepsy. It usually affects children with previously normal development and causes regression in all behaviours (1).

Etiology

Landau-Kleffner's syndrome etiology is still unknown, but it is considered to be under the influence of many factors, such as genetics, epigenetics, and the environment. A genetic basis is still unclear, but 5-20% of families show mutations in the GRIN2A gene (2). Other conditions correlated with a possible etiology of LKS are progressive encephalitis, toxoplasmosis, temporal lobe tumour, and inflammatory encephalitis (3).

Epidemiology

Landau and Kleffner described six children with the condition in 1957. Since then, more than 350 children have been diagnosed worldwide with LKS. The onset is usually between 2-8 years of age with a peak between 5 and 7 years. In some cases, it has been reported as early as 18-22 months and as late as 13-14 years of age. Boys are affected twice as often as girls (4,5).

Clinical presentation

Landau-Kleffner syndrome is a condition with acute or subacute loss of language and global regression in behaviour. After a previously normal development, the child experiences loss of receptive and expressive language, but intellije prethodno postiglo normalni napredak u razvoju jezika, dijete gubi receptivne i ekspresivne jezične vještine, ali zadržava opću inteligenciju. Pojava je popraćena abnormalnostima EEG-a, a u dijelu slučajeva i epileptičkim napadajima. Vještine se gube tijekom dana ili tjedana. Povezanost javljanja epileptičkih napadaja i gubitka jezika varira, epileptički napadaju mogu nekoliko mjeseci do dvije godine prethoditi gubitku govora te obrnuto, gubitak govora može prethoditi epileptičkim napadajima (4). LKS nije povezan s organskim oštećenjima mozga i javlja se u prethodno normalne djece koja su već razvila dobno odgovarajući govor. Međutim, postoje i izvještaji o „klinički definiranom“ LKS-u u bolesnika s kongenitalnom ili stečenom lezijom mozga te u djece koja su pokazivala anomalije jezičnog razvoja prije jezične regresije (5,6). Najznačajnija odrednica sindroma je stečena afazija, zatim slijede kognitivno oštećenje i globalna regresija ponašanja. Epileptički napadaji su rijetki i nisu preduvjet za dijagnozu. Tip afazije tipično je auditorna verbalna agnozija, odnosno nesposobnost pridavanja značenja zvukovima. Djeca koja su se razvijala urednim tokom odjednom pokazuju gubitak jezika, potpunu ili djelomičnu nemogućnost prepoznavanja, procesiranja i interpretiranja verbalnih i/ili neverbalnih zvukova. Zbog toga se ovaj sindrom često zamjenjuje gluhoćom ili, ako je u kombinaciji s problemima u ponašanju, poremećajem iz spektra autizma. Važno je naglasiti da je kod Landau-Kleffnerovog sindroma slušanje očuvano (audiogram pokazuje normalnu krivulju), ali dijete ne razumije ono što čuje. Problemi s razumijevanjem govora vremenom utječu i na govornu produkciju. Nastupaju problemi s artikulacijom i prizivanjem riječi, brbljanje, perseveracije i mutizam (4). Tijek afazije progresivan je i fluktuirajući, sa spontanim poboljšanjima i pogoršanjima tijekom vremena (7). Konačna i često teška klinička manifestacija LKS-a je poremećaj ponašanja, koji se javlja kod gotovo 75 % bolesnika, u obliku značajnih deficita pažnje i koncentracije, impulzivnosti

gence remains intact. Other manifestations of LKS are EEG abnormalities and, in some cases, epileptic seizures. In the course of days, weeks, or months, those abilities are lost. Correlations between epileptic seizures and language impairments vary. Seizures can precede language impairments up to a couple of months to 2 years, and otherwise (4). As previously mentioned, LKS is not related to organic brain lesions and it affects children with previously normal development of speech. However, some authors report “clinically defined” LKS in patients with a congenital or acquired brain lesions and in children with pre-existing language difficulties (5,6). The most prominent symptom of LKS is acquired aphasia, followed by cognitive damage and global behavioural problems. Epileptic seizures are rare and not required for setting the final diagnosis of LKS. The type of aphasia is usually verbal-auditory agnosia, a failure to give a semantic significance to different sounds. Children show a sudden loss of language, complete or partial ability to recognise, process, and interpret verbal and/or non-verbal sounds. That is why LKS is commonly misdiagnosed as deafness. LKS patients have normal peripheral hearing and problems with understanding the meaning of what is said. Receptive language problems affect speech production with typical signs such as difficulties with articulation, babbling, verbal perseverations, or mutism (4). The aphasia demonstrates a progressive course with spontaneous improvements and exacerbations over time (7). Behavioural difficulties such as attentional deficits, impulsivity, and hyperactivity are common, found in 75% of patients with LKS (5,8). Behavioural disorders can occur primarily due to functional disinhibition at the limbic or diencephalic level and secondary as a result of frustration due to a loss of understanding. Periods of anger and aggression often appear unmotivated, which can be interpreted as a primary behavioural disorder, and such children are sent to a psychiatrist under i hiperaktivnosti (5,8). Smetnje u ponašanju mogu nastupiti primarno zbog funkcijske dezinhibicije na limbičkoj ili diencefaličkoj razini i sekundarno kao posljedica frustracije zbog gubitka razumijevanja. Često se nemotivirano javljaju izljevi bijesa i agresije, koji se mogu tumačiti kao primarni poremećaj u ponašanju te se takva djeca pod pogrešnom uputnom dijagnozom pošalju psihijatru (9). Robinson i suradnici u svom radu (10) opisuju tri faze razvoja sindroma. Prva faza je faza akutnog propadanja jezičnog razumijevanja najčešće praćeno pogoršanjem u jezičnoj proizvodnji. Problemi u ponašanju su blagi i povezani s frustracijom oko komunikacijskih teškoća, a neverbalne vještine ostaju očuvane. Prva faza obično traje nekoliko tjedana nakon čega prelazi u drugu fazu. Druga faza je faza kroničnog pogoršanja u kojoj se nastavljaju abnormalnosti EEG-a. Kod težih slučajeva gubi se razumijevanje zvukova iz okoline, dijete potpuno gubi govor (mutizam) i nastupaju ozbiljni problemi u ponašanju. Djeca mogu postati agresivna i destruktivna, a njihova je pažnja značajno narušena. Ponekad su agresivnost i udaljavanje toliko izraženi da izgledaju kao psihotični poremećaj. Druga faza se javlja između prve i sedme godine života. U trećoj fazi nastupa spontani oporavak, prosječno 5,2 mjeseci nakon normalizacije EEG-a i prestanka epileptičkih izbijanja. Problemi u ponašanju nestaju prvi. U lakšim slučajevima jezično razumijevanje se generalno poboljšava, govor se počinje prepoznavati te se odbacuju sredstva alternativne komunikacije. Kod težih slučajeva prvo se oporavlja sposobnost razumijevanja neverbalnih zvukova iz okoline, a postupno i razumijevanje govora.

Dijagnoza

Postavljanju dijagnoze prethodi multidisciplinska obrada stručnjaka iz područja pedijatrije, neuropedijatrije, dječje psihijatrije, psihologije, logopedije, otorinolaringologije. Osnovna dijagnostička metoda je elektroencefalogra-

an incorrect referral diagnosis (9). In their paper, Robinson and associates (10) described the evolution of LKS through three stages. The first stage is acute deterioration of receptive language followed by deterioration in expressive language. Behavioural difficulties are usually mild and linked to communication frustration. The duration of the first stage is usually a few weeks. The second stage is chronic deterioration with continuation of EEG abnormalities. In more severe cases, the understanding of the sounds from the environment is lost, the child completely loses speech (mutism), and experiences serious behavioural problems. Children can become aggressive and destructive, and their attention is significantly disrupted. Sometimes aggression and distress are so pronounced that they look like a psychotic disorder. The second phase occurs between 1 and 7 years of age. In the third stage, spontaneous recovery occurs, averaging 5.2 months after EEG normalization and epileptic outbreaks. Behavioural problems disappear first. In the milder cases, language understanding is generally improved, speech is beginning to be recognized and alternative means of communication are rejected. In more severe cases, the ability to understand non-verbal sounds from the environment is first recovered, followed by gradual understanding of speech.

Diagnosis

LKS requires an interdisciplinary assessment of different specialists – a pediatrician, neuropediatrician, child psychiatrist, psychologist, speech and language pathologist, and an otolaryngologist. The basic diagnostic method is electroencephalography. Increased epileptiform activity can be confirmed by polysomnographic recording. As soon as a child falls asleep, CSWS occurs (Continuous Spike and Wave During Slow Sleep), mainly at 1.5-2.5 Hz, which lasts throughout all stages of slow sleep. In 70-80% cases of LKS, epileptic seizures of fija. Prisutna povećana epileptiformna aktivnost može se potvrditi polisomnografskim cjelonoćnim snimanjem. Čim dijete zaspi javlja se CSWS - kontinuirano izbijanje šiljak-val kompleksa za vrijeme spore faze spavanja (od engleskog termina *Continuous Spike and Wave During Slow Sleep)*, uglavnom na 1,5-2,5 Hz, koje traje u svim fazama sporog spavanja. U 70-80 % slučajeva javljaju se i epileptički napadaji niske učestalosti. U ostalim slučajevima (20-30 %) epileptički napadaji se nikada ni ne pojave unatoč značajnim elektroencefalografskim abnormalnostima. Epileptogena izbijanja su pretežito unilateralna ili jasno lateralizirana. Kada su prisutni, napadaji su rijetki i uglavnom jednostavni za kontrolu i liječenje. Oni mogu biti parcijalni kompleksni, parcijalni klonički, generalizirano toničko-klonički i atonički napadaji (5). U sklopu diferencijalne dijagnoze mogu se učiniti nalazi cerebrospinalnog likvora, CT snimanje (kompjutorizirana tomografija) i MR snimanje (magnetska rezonancija) mozga koji su obično uredni i bez specifične patologije. U rjeđem broju slučajeva zabilježeni su blagi porast proteina u likvoru, promjene na bijeloj tvari i strukturna lezija. Moguć je pronalazak blagog povećanja ili asimetrije temporalnih rogova, moguće kao posljedica dugotrajnih epileptičkih napadaja. Nije pronađena povezanost afazije i hipometabolizma glukoze temporalnog režnja, jer su slični nalazi opaženi i kod djece s epilepsijom koja nemaju smetnje govora (3). Mikroskopski pregled kirurških uzoraka mozga pokazao je minimalnu gliozu, ali za sada bez dokaza za encefalitis (9).

Diferencijalna dijagnoza

Iako postoje znatna preklapanja u kliničkoj slici LKS-a i autizma, postoje i razlike. Velika većina djece s autizmom pretrpi jezičnu regresiju prije dobi od 3 godine, u usporedbi s prosječnom dobi jezične regresije u LKS-u od 5-7 godina. Samo u 10 % djece s LKS-om jezična regresija nastupi prije 3. godine. Kako se regresija u au-

low frequency occur. In other cases (20-30%), epileptic attacks never occur, despite significant electroencephalographic abnormalities. Epileptogenic outbreaks are predominantly unilateral or clearly lateralized. When present, seizures are rare and mostly simple to control and treat. They can be partially complex, partially clonic, generalized tonic-clonic, and atonic seizures (5). As a part of the differential diagnosis, cerebrospinal fluid, CT scans (computerized tomography), and MR (magnetic resonance) brain scans can be performed, which are usually normal and without a specific pathology. In a small number of cases there is a slight protein increase in cerebrospinal fluid, changes in white matter, and structural lesions. It is possible to find a slight increase or asymmetry of temporal horns, possibly due to long-lasting epileptic seizures. No association of aphasia and glucose hypometabolism of temporal lobe was found, as similar findings have been observed in children with epilepsy with no speech difficulties (3). The microscopic examination of surgical brain patterns showed a minimal gliosis, but for now without evidence of encephalitis (9).

Differential diagnosis

Although there are significant overlaps in the clinical course of LKS and autism, there are also differences. The vast majority of children with autism suffer from language regression before the 3rd year of age, compared to the average age in LKS of 5 to 7 years. In only 10% of children with LKS the speech regression appears before 3 years of age. As regression in autism occurs early, there usually appears a loss of individual words, as compared to more drastic changes in children with LKS that are typically older and have more developed vocabulary and language. LKS does not have a behavioural profile with core changes in autism as specific abnormalities of social functioning and stereotypical patterns of interest and behaviour. Children with severe tizmu pojavljuje rano, obično dolazi do gubitka pojedinačnih riječi, u usporedbi s drastičnijim promjenama kod djece s LKS-om koji su tipično stariji i imaju razvijeniji vokabular i jezik. LKS ne sadrži profil ponašanja koji obuhvaća jezgrovne promjene u autizmu kao specifične abnormalnosti socijalnog funkcioniranja i stereotipne obrasce interesa i ponašanja. Djeca s teškom fokalnom epilepsijom od statičnih oštećenja mozga koji uključuju jezični korteks mogu imati epizodičnu iktalnu afaziju ili status epileptikus i postati trajno afazični (3). Rane faze LKS-a s hiperkinezijom i blagom auditorno verbalnom agnozijom mogu se zamijeniti s hiperkinetičkim poremećajem. Diferencijalna dijagnoza također uključuje gluhoću, selektivni mutizam i akutne psihijatrijske poremećaje.

Liječenje LKS-a

Ne postoji međunarodna usuglašenost u pogledu liječenja LKS-a. Što ranije započinjanje farmakoterapije pokazalo se blagotvornim za kasniju prognozu. Dugotrajna epileptička aktivnost povećava težinu bolesti i u progresiji bolesti ima veće značenje od dobi nastanka. Dugoročni cilj liječenja je normaliziranje jezičnih poremećaja. Konvulzije su obično blage, rijetke i reagiraju na antiepileptike, međutim često je potrebna dugogodišnja terapija održavanja. Od antiepileptika se najčešće koriste valproati, klobazam, levetiracetam, etosuksimid i sultiam (4). Općenito se preporučuje izbjegavanje drugih antiepileptika kao što su fenitoin, fenobarbital, karbamazepin, okskarbazepin, lamotrigin i topiramat jer su povezani s pogoršanjem epileptičkih pražnjenja (5). Učestalost i vrsta napadaja nemaju utjecaj na prognozu. Liječenje antikonvulzivnom monoterapijom općenito je učinkovito za kontrolu napadaja, ali ne i za afaziju (3). Ako epileptička aktivnost i jezični problemi nisu poboljšani antiepilepticima tijekom nekoliko tjedana, preporučuje se upotreba kortikosteroida (4). Intravenski imunoglobulini pokazali su obećavajuće rezultate u nekim

focal epilepsy resulting from brain damage of linguistic cortex may have episodic ictal aphasia or status epilepticus and become permanently aphasic (3). Early LKS phases with hyperkinesia and mild auditory-verbal agnosia may be mistaken by a hyperkinetic disorder. The differential diagnosis also includes deafness, selective mutism, and acute psychiatric disorders.

Treatment of LKS

There is no international agreement on the treatment of LKS. The earlier start of pharmacotherapy proved to be beneficial to the later prognosis. Long-term duration of epileptic activity increases the severity of the disease and appears to have a more adverse effect than the earlier age onset. The long-term goal of treatment is improving language difficulties. Convulsions are usually mild, rare, and respond well to antiepileptics, however, long-term therapy is often required. Valproate, clobazam, levetiracetam, ethosuximide, and sulthiame are most commonly used in antiepileptics (4). It is generally recommended to avoid other antiepileptics such as phenytoin, phenobarbital, carbamazepine, oxcarbazepine, lamotrigine, and topiramate as they are associated with worsening of epileptic discharges (5). Frequency and type of seizure have no effect on the prognosis. Anticonvulsant monotherapy treatment is generally effective for seizure control but not for aphasia (3). If epileptic activity and language problems are not improved with antiepileptics over a few weeks, corticosteroids are recommended (4). Intravenous immunoglobulins have shown promising results in some cases of LKS. Ketogenic diet and vagus nerve stimulation have led to clinical improvement in some patients (5). Surgical treatment in the form of multiple subpial transections was performed in a limited number of children, with the aim of stopping the spread of epileptiform activity. Improvements were described in individual cases. Such type of treatment is reserved for those children slučajevima LKS. Ketogena dijeta i stimulacija vagusnog živca doveli su do kliničkih poboljšanja kod pojedinih pacijenata (5). Kirurško liječenje u obliku višestrukih subpijalnih transekcija provedeno je u ograničenom broju teško pogođene djece, u svrhu sprječavanja širenja epileptiformne aktivnosti. Opisana su poboljšanja u pojedinačnim slučajevima. Takva vrsta liječenja rezervirana je za onu djecu kod koje su prisutni ustrajna afazija i napadaji rezistentni na lijekove (4,9). Drugi oblik liječenja, presudan za odnos djeteta s okolinom, ponašanje i psihosocijalno funkcioniranje, održavanje je komunikacije putem govorno jezične terapije. Uvode se mjere u obliku učenja znakovnog jezika i drugih oblika potpomognute komunikacije s istovremenim osposobljavanjem slušanja, što pozitivno pridonosi intelektualnoj stimulaciji i razvoju (4). Pojedina djeca s dugogodišnjom auditornom verbalnom agnozijom uspješno su integrirana u škole za gluhe (3).

Prognoza

Na prognozu može utjecati koliko varijabli: dob početka, obrazac jezičnog deficita, učestalost i topografija EEG pražnjenja, trajanje epilepsije, učinkovitost i nuspojave antiepileptika. Nepovoljni prognostički faktori su pojava LKS-a prije četvrte godine života, trajanje afazije dulje od jedne godine, trajanje i kontinuitet CSWS-a (3). Epileptički napadaji imaju tendenciju smanjivanja i obično nestaju do 15. godine života. Opća inteligencija je najčešće sačuvana (4). Prognoza za poremećaje govora i jezika varira od potpunog i djelomičnog oporavka do trajnog oštećenja verbalne komunikacije. Za potonju skupinu važno je uspostaviti komplementarne i alternativne metode komunikacije što je prije moguće. Brzi početak liječenja lijekovima pokazao se važnim za prognozu. Dugotrajnost epileptičke aktivnosti pogoršava prognozu i čini se da ima veći nepovoljni utjecaj od ranije dobi javljanja sindroma. Učestalost i vrsta epileptičkih napadaja ne utječe na prognozu kognicije i jezičnog razvoja.

with persistent aphasia and drug resistant seizures (4,9). Another type of treatment, crucial to the relationship of the child to the environment, behaviour, and psychosocial functioning, is maintaining communication through speech therapy. Measures are introduced in the form of sign language learning and other forms of assisted communication, which positively contributes to intellectual stimulation and development (4). Some individuals with long-term auditory-verbal agnosia have successfully integrated into schools for deaf children (3).

Prognosis

Several variables can affect the prognosis: age, the form of language deficit, frequency, and topography of EEG discharges, the duration of epilepsy, efficacy, and side effects of antiepileptics. Unfavourable prognostic factors are the occurrence of LKS prior to the fourth year of life, duration of aphasia for longer than one year, duration and continuity of CSWS (3). Epileptic seizures tend to decrease and usually disappear up to 15 years of age. General intelligence is most often preserved (4). Prognosis for speech and language disorders varies from total and partial recovery to permanent damage of verbal communication. For the last group it is important to establish complementary and alternative communication methods as soon as possible. The rapid onset of drug treatment proved to be important for the prognosis. Long-term epileptic activity exacerbates the condition and appears to have a more adverse effect than the earlier age onset. Frequency and types of epileptic seizures do not affect the prognosis of cognition and language development.

CASE REPORT

In May 2017, a boy aged 4 years and 8 months reported to a child and adolescent psychiatrist at the recommendation of a speech therapist,

PRIKAZ BOLESNIKA

U svibnju 2017. g. dječak u dobi od 4 godine i 8 mjeseci doveden je na pregled dječjem psihijatru, po preporuci logopeda, u sklopu specifičnog poremećaja razvoja govora i jezika.

U obitelji postoji pozitivan psihijatrijski hereditet na shizoafektivni poremećaj po ocu i depresivni poremećaj po majci. Dječak je rođen iz prve majčine trudnoće održavane mirovanjem zbog insuficijencije cerviksa. Majka hospitalizirana 2 tjedna prije poroda, koji je bio prirodnim putem, zadržan 5 dana zbog simptomatskog liječenja novorođenačke žutice. Urednog ranog psihomotornog razvoja, prohodao u dobi od 12 mjeseci, sfinktere kontrolirao u dobi od 2,5 godine, prve riječi sa značenjem s godinu dana, spajao rečenice u dobi od 2 godine. Ne pohađa vrtić. Odrasta u narušenim obiteljskim odnosima, izložen roditeljskom neslaganju, roditelji su se razveli no zbog nepovoljne financijske situacije žive na istoj adresi. Ima 4 godine mlađu sestru koja je zdrava. Majka je nezaposlena, u potpunosti je posvećena dječaku.

U dobi od 3 godine započele su promjene u ponašanju u obliku neposlušnosti, hiperaktivnosti i ljubomore prema mlađoj sestri koja povremeno prerasta u fizičku agresiju. U dobi od 4 godine i 5 mjeseci, iz govora razvijenog normalnog za dob (izražavanje u rečenicama), prestao je verbalno komunicirati. Obitelj je proživjela i tragediju, tada je od srčane bolesti naglo preminuo bratić po majci u dobi od 15 godina. Dječak od rane dobi izbjegava igru s drugom djecom, igra se većinom sam. Motorički je nespretan, čak i uz stalni nadzor ima česte padove i ozljede. U ožujku 2017. g. logoped i psiholog su utvrdili da ima niži kvocijent mentalnog razvoja, govorno-jezične teškoće i teškoće socijalne komunikacije.

Na tjelesnom planu boluje od astme (u terapiji montelukast, flutikazon, loratadin), često teško diše na nos, po noći hrče. U svibnju 2017. g. pregledao ga je otorinolaringolog: timpano-

as part of a specific speech and language developmental disorder.

In the family there is a positive psychiatric heredity to a schizoaffective disorder (father) and a depressive disorder (mother). The boy was born from mother's first pregnancy, held at rest due to cervical insufficiency. The mother was hospitalized for 2 weeks before the birth, which was naturally occurring, and the boy was kept for 5 days due to symptomatic treatment of newborn jaundice. The early psychomotor development was correct, he walked at the age of one year, controlled sphincters at the age of 2.5 years, had the first meaningful word at the age of one year, merged words into sentences at the age of 2 years. He did not go to kindergarten. He is growing up in a disrupted family, is exposed to parental disagreement. Parents divorced but because of unfavourable financial situation still live at the same address. He has a sister who is 4 years younger and healthy. The mother is unemployed, she is entirely devoted to the boy.

At age 3 changes in behaviour began in the form of disobedience, hyperactivity, and jealousy and physical aggression towards the younger sister. At the age of 4 years and 5 months, after fully developed speech for his age (expression in sentences), he stopped communicating. At that time the family experienced a tragedy, his 15-year-old cousin suddenly died of a heart disease. From an early age he avoided playing with other children, mostly plays alone. He is clumsy, prone to injury, even with constant monitoring. In March 2017 he was estimated by speech therapist and psychologist (lower quotient of mental development, speech-language difficulties, and difficulties of social communication).

He suffers from asthma (in the treatment with montelukast, fluticasone, loratadine), his nose is often clogged, snores during the night. In May 2017 he was examined by an otolaryngologist, the timpanogram was in order, a review of an audiologist was recommended. He is regularly vaccinated. No known allergy to medication.

gram je bio uredan, preporučen je pregled audiologa. Redovito je cijepljen prema kalendaru cijepljenja. Nema alergija na lijekove.

Prigodom prvog pregleda kod dječjeg psihijatra uspostavio se kontakt očima i komunikacija gestama. Govor je imitirao s nekoliko jednostavnih slogova (npr. ato-tu-ta; au-au) pri čemu se dobio dojam kako nešto pokušava objasniti. Kako je pregled tekao, postao je motorički nemiran, želio napustiti sobu, a na majčinu zabranu počeo bacati predmete iz blizine te udarati nogama u zid. Pokazale su mu se igračke na što se smirio, a igru je ostvarivao na razini nižoj od očekivane za dob (ubacivanje geometrijskih oblika). Preporučeno je ponavljanje logopedske procjene i pregled neuropedijatra.

Početkom lipnja 2017. g. učinjena je logopedska procjena prigodom koje je opservirano da se služi nezrelim komunikacijskim sredstvima, najčešće gestom pokazivanja uparenom s vokalizacijama (npr. pokazuje na kišu vani i na glavu kako će biti mokar). Jezično razumijevanje se nije uspjelo procijeniti zbog slabije pažnje, ostavio je dojam da ne razumije očekivanja i uputu ispitivača. Jednostavne naloge razumije u svakodnevnim situacijama. Zabranu razumije, ali ne poštuje uvijek. Teško je imitirao i najjednostavnije slogove. Ipak, povremeno se mogla čuti riječ sa značenjem (doma, mama). Odmah je uključen u logopedsku terapiju, s ciljem razvoja komunikacijskih sredstava i širenja broja funkcija kako bi se umanjila frustracija.

Sredinom lipnja učinjen je kontrolni pregled kod dječjeg psihijatra. Primijećen je napredak u ponašanju, počeo se uključivati u igru s drugom djecom, kada bi povrijedio majku ispričao bi se, u trgovini je bio spreman na kompromis, prema sestri je bio obazriviji, jedino što se komunikacija svela gotovo u potpunosti na geste. Pri pregledu je bio razigran, uspijevao je biti djelomično poslušan uz povremeno majčino fizičko sputavanje, što je doživljavao kao igru i nije prkosio.

During that first examination, the child psychiatrist established eye contact and gesture communication. He imitated speech with a few simple slogans (e.g. ato-tu-ta; au-au), leaving the impression that he was trying to explain something. As the examination went on he became motor-driven and wanted to leave the room. As his mother forbid it, he began to throw objects and kick his legs at a wall. The therapist showed him toys, he began to play and calmed down. The game was at a level lower than expected for his age (inserting geometric shapes). We recommended logopedic re-evaluation and examination by a neuropediatrist.

At the beginning of June 2017, he underwent a logopedic assessment that observed he used immature communication means, most often gestures paired with vocalizations (e.g. showing rain outside and pointing to the head as it would be wet). The linguistic understanding was not evaluated because of the lack of attention; he left the impression that he did not understand the examiners' expectations and guidance. Simple orders are understood in everyday situations. Lack of permission is understood, but he does not always respect it. It was hard for him to imitate the simplest slogans. However, occasionally a meaningful word could be heard (home, mom). He was immediately involved in logopedic therapy, with the aim of developing communication tools and expanding the number of functions to reduce frustration.

In mid-June a psychiatric examination was carried out. Progress in behaviour was noted, he began to be involved in playing with other children, when he would hurt his mother, he would apologize, towards his sister he was more cautious. But, he communicated almost entirely by using gestures. He was playful during the review, managed to be partially obedient with occasional interventions from his mother, which he experienced as a game and did not defy.

In early July 2017 he was reviewed by a neuropediatrist, EEG and MR brain imaging were rec-

Početkom srpnja 2017. g. pregledao ga je neuropedijatar, preporučeno je EEG i MR snimanje mozga. MR mozga učinjen 24. 7. 2017. g. bio je uredan („Nešto širi perivaskularni likvorski prostori sublentikularno obostrano. Diskretni hiperintenziteti bijele tvari peritrigonalno, prvenstveno odgovaraju nedovršenoj mijelinizaciji. Ostalo uredno.“). Nalaz EEG-a bio je tehnički loš, nije ga se moglo analizirati, preporučeno je cjelonoćno snimanje u specijaliziranoj ustanovi. Sredinom srpnja 2017. g. pregledao ga je audiolog koji je preporučio detaljniju audiološku obradu upućivanjem u drugu ustanovu.

Krajem kolovoza 2017. g. kontrolnim pregledom kod dječjeg psihijatra opservirano je pogoršanje psihičkog stanja u obliku daljnjeg neposluha te fizičke agresije koju je počeo ispoljavati i prema drugoj djeci, koja se onda izbjegavaju s njim igrati. Noćni san postaje sve više narušen, isprekidan, budi se noću uz plač i strah. Tada smo, uz logopedski tretman, preporučili uključivanje u *neurofeedback* tretmane.

Početkom rujna 2017. g. pristigao je nalaz cjelonoćnog EEG snimanja: uvjerljivo epileptigeno promijenjen, na osnovi čega je postavljena dijagnoza Landau Kleffnerovog sindroma. Poslan je uzorak za analizu panel gena za epilepsiju. Krajem rujna uveden je u terapiju antiepileptik etosuksimid. Uključen i u tretman radnog terapeuta.

Na kontrolnom pregledu kod neuropedijatra u prosincu 2017. g., nakon početnog pozitivnog učinka i pomaka na uvođenje antiepileptika, opservira se ponovno pogoršanje u obliku javljanja afektivnih kriza prigodom kojih prestane disati i poplavi, preporučuje se uvođenje anksiolitika diazepama po potrebi.

U siječnju 2018. g. prigodom kontrolnog pregleda kod dječjeg psihijatra također je preporučeno uzimanje nižih doza anksiolitika diazepama, povremeno i po potrebi. Zamijećena je nastavna regresija ponašanja, dječak nije u potpunosti svjestan posljedica svojih djela i

ommended. MR imaging was done on 24 July, 2017 and it was in order (“discrete hyperintensities of white matter peritrigonally, primarily corresponding to unfinished myelination.”). The EEG finding was technically bad, could not be analysed. It was recommended to redo the EEG examination at a specialized institution. In mid-July 2017 he was examined by an audiologist that recommended more detailed audiological examination in another institution.

At the end of August 2017, he was re-examined by a child psychiatrist. The following was observed: a deterioration of the mental state in the form of further disobedience and physical aggression that he began to show towards other children who then avoided playing with him. Night sleep became more and more disturbed, intermittent, he was waking up at night while weeping and fearful. At that time, with logopedic treatment, we recommended starting with neurofeedback treatments.

At the beginning of September 2017 arrived the result of EEG recording during a whole night of sleep, which showed convincingly epileptogenically altered EEG, and the diagnosis of Landau Kleffner syndrome was established. A sample for analysis of epileptic genes was submitted. At the end of September, he was introduced to the therapy of an antiepileptic drug ethosuksimide. Also, he was included in the treatment by an occupational therapist.

In December 2017, after the initial positive effect on the introduction of antiepileptic drugs, affective crises started to appear, in which he would stop breathing and “turn blue”. A neuropediatrist recommended the introduction of anxiolytic drug diazepam.

In January 2018 a child psychiatrist also recommended to occasionally take lower doses of anxiolytic diazepam. Further regression of the behaviour was noted, the boy was not fully aware of the consequences of his actions and the possible danger to himself and others that moguće opasnosti za sebe i druge koja slijedi. Ponašanje regredira, predmete iz neposredne blizine stavlja u usta, igra postaje nesvrsishodnija. U obitelji se događaju velike promjene, s majkom i sestrom preselio je u Sigurnu kuću, majka je formirala novu bračnu zajednicu, očuh je na radu u inozemstvu. Planiraju preseljenje koje je otežano jer otac ne daje privolu. Majci je pružen suport te je preporučeno ustrajanje na strukturiranim odgojnim mjerama te nastavak radno-terapijske i logopedske terapije.

U vrijeme pisanja ovog članka dječak je i dalje u liječenju. S povećavanjem doze antiepileptika više se ne javljaju noćni napadaji, posljedično je smanjen dnevni umor. Kontinuirano je uključen u logopedsku terapiju u kojoj se radi na uvođenju potpomognute komunikacije manualnim znakovima i sličicama, što pozitivno utječe na njega te se smanjuje frustracija i agresija u ponašanju. Izražavanje je i dalje na razini nehotičnih vokalizacija i nekoliko slogova i vokala koje dječak na poticaj ponavlja. Jezično razumijevanje zasad je ovisno o vizualnim podražajima s obzirom da je kod dječaka prisutna verbalno-auditivna agnozija koja mu onemogućava razumijevanje slušnih podražaja iz okoline. Očekuju se nastavni pozitivni pomaci jer se planira daljnja titracija terapije antiepileptikom, a i jer se primjećuju usvojene adekvatnije odgojne vještine majke.

RASPRAVA

Ponajprije bismo se osvrnuli na pravodobnost uspostavljanja dijagnoze. Dječaku je u svibnju 2017. godine preporučen pregled kod neuropedijatra, a u rujnu iste godine je uključen u terapiju antiepileptikom, koja je presudna u sprječavanju daljnjih oštećenja mozga. Sa stručne strane u konkretnom prikazanom slučaju zamjetna je iznimno dobra diferencijalna dijagnostika i upućivanje djeteta na sve neophodne potrebne dijagnostičke preglede. Postoji prostor za poboljšanje skraćenjem liste čekanja za pojedine pretra-

could follow. He placed objects from close proximity in his mouth, played differently. His family underwent major changes, with them moving to a safe house, the mother entering into a new marriage with a stepfather that worked abroad. They planned relocation, but the father did not give his consent. We provided support to the mother and recommended structured educational measures and continuation of the occupational and speech therapies.

At the time of writing this article, the boy is still in treatment. With increasing doses of antiepileptics, no night-time seizures occur, resulting in reduced daily fatigue. He is continuously involved in speech therapy with introducing assisted communication (in the form of sign language and pictures), which has a positive influence and reduces frustration and aggression. Expression is still on the level of vocalization and several vocals that the child repeats when encouraged to do so. Language comprehension is now dependent on visual stimuli, as there is a presence of verbal-auditory agnosia that prevents him from understanding any auditory stimuli. Positive outcomes are expected as further titration of antiepileptic therapy is planned, and also due to the fact that the mother is adopting more appropriate education skills.

DISCUSSION

It's important to set the diagnosis in time. In May 2017, the boy was referred to a neuropediatrician, and in September of the same year antiepileptic pharmacotherapy was initiated, crucial in preventing further brain damage. From a professional point of view in the present case, a very good differential diagnosis and referral of the child to all the necessary diagnostic examinations are noticeable. Further improvements could be made, such as shortening of the waiting list for certain examinations, which is a general problem, and not only for this diagnostic category. Introduced pharmacotherapy with antiepileptics proved to ge, što nije problem isključivo ove dijagnostičke kategorije. Uvedena farmakoterapija antiepilepticima pokazala se uspješnom, noćni napadaji se više ne pojavljuju. Iako su općenito kod LKS epileptički napadaji rijetki, zbog uvijek prisutnih epileptogenih promjena preporuka je da se terapija antiepilepticima uvodi. Za razliku od epilepsije, regresiju govora je mnogo zahtjevnije liječiti i potreban je multidisciplinski pristup. Često se događa da unatoč aktivnom pristupu ne vidimo značajnije terapijske pomake. Dijete nije u mogućnosti u potpunosti sudjelovati u intervencijama, jer ih dobrim dijelom nije sposobno shvatiti. Prigodom pretraživanja literature za prostor Hrvatske naišli smo na prikaz djeteta s LKS sindromom čija je prva klinička manifestacija bila konvulzivni napadaj a tek zatim regresija govora. Naglašen je također problem razvoja govora i izazova koje on predstavlja (11). Iako je bolest progresivna, česta su spontana poboljšanja i pogoršanja, što smo jasno mogli zamijetiti kod dječaka. Faze pogoršanja su uobičajeno trajale nekoliko mjeseci, a jednako dugo su trajale i faze poboljšanja. Dječak je ispoljavao glavninu smetnji ponašanja opisanih u literaturi, kao što su deficit pažnje, impulzivnost, hiperaktivnost, izljevi bijesa i agresije (5,8). Majka prikazanog djeteta prigodom cijelog procesa obrade, praćenja i liječenja bila je vrlo suradljiva, savjesno je dovodila dijete na tjedne terapije i pokušavala primijeniti sve preporuke. Unatoč našim naporima i savjetovanjima ima nerealna očekivanja od liječenja i nije sposobna shvatiti ograničenja djeteta, što je razumljivo s obzirom da je do 3. godine života dijete imalo uredan razvoj govora. U sklopu LKS-a razvoj dječaka bit će određen i ograničen spoznajnim teškoćama zbog čega je istovremeno potrebno raditi i na pružanju suporta majci.

ZAKLJUČAK

U radu smo nastojali ukazati prije svega na multidisciplinsku obradu i jaku povezanost između dječjih psihijatara, pedijatara i surad-

be successful, night-time seizures no longer appear. Although epileptic seizures are rare in LKS due to continuously present epileptogenic alterations, it is recommended that an antiepileptic therapy is introduced. Unlike epilepsy, speech regression is much more difficult to treat and requires a multidisciplinary approach. It is often the case that despite the active approach, we do not see any significant therapeutic changes. The child is not able to fully participate in the interventions as is largely unable to understand them. When searching for Croatian literature, we came across a child with LKS syndrome whose first clinical manifestation was a convulsive attack and then speech regression. The emphasis was also placed on the problem of speech development and the challenges it poses (11). Although the disease is progressive, spontaneous improvements and deteriorations are common, which we can clearly see in this case. The deterioration phenomena usually lasted for several months, and the improvement phases for the same length of time. The boy showed most of the behavioural disturbances described in the literature, such as attention deficit, impulsiveness, hyperactivity, outbreaks of anger, and aggression (5,8). During the entire process of monitoring and treatment the mother was very cooperative, conscientiously brought the child into weekly therapy and tried to apply all the recommendations. Despite our efforts and counselling, she still has unrealistic treatment expectations and is incapable of understanding the limitations of the child. This is understandable since the child had first 3 years of normal speech development. Within LKS, the development of the boy will be determined and limited by cognitive difficulties, which is why it is also necessary to work on supporting the mother.

CONCLUSION

In this paper, we have tried to point out to the multidisciplinary approach and the strong connection between psychiatrists, paediatricians, nih struka u sustavu sa ciljem što brže dijagnostike i upućivanja djeteta u tretman. Često se upravo ovaj poremećaj okarakterizira kao mutizam, autizam ili neki drugi pervazivni razvojni poremećaj čime izostaje pravodobna obrada i intervencija. Specifičnost Landau Kleffnerovog sindroma je akutni gubitak govora i jezika u djeteta koje se do tada govorno normalno razvijalo te globalna regresija ponašanja, no rijetkost susretanja s ovim sindromom čini ga iznimno zahtjevnim za dijagnosticiranje. Dijagnoza se postavlja specifično epileptogeno promijenjenim nalazom EEG-a uz uredan nalaz MR-a mozga, zajedno s kliničkim manifestacijama sindroma. Nadamo se kako ćemo ovim prikazom povećati svijest stručnjaka i prepoznavanje ovog sindroma, s ciljem što ranije intervencije i rehabilitacije. Važno je naglasiti da se govorna rehabilitacija može započeti i prije postavljanja dijagnoze, na osnovi kliničke slike, kako bi ishod liječenja bio što bolji.

and other health care professionals with the aim of speeding up the diagnosis and referral of the child to treatment. This disorder is often characterized as mutism, autism, or some other pervasive developmental disorder, which results in delays of medical treatment. The specificity of Landau Kleffner syndrome is an acute loss of speech and language in a child who developed normal language and global regression of behaviour, but the rarity of encountering this syndrome makes it extremely demanding to diagnose. The final diagnosis is based on an epileptogenically altered EEG finding during sleep with an orderly brain MRI finding, along with clinical manifestations of the syndrome. We hope that this presentation will increase the awareness of the experts and the recognition of this syndrome, with the aim of early intervention and rehabilitation. It is important to emphasize that speech rehabilitation can be started even before the diagnosis is made, based on the clinical signs, making the outcome of the treatment as good as possible.

LITERATURA / *REFERENCES*

1. Van Bogaert P, King MD, Paquier P, Wetsburger C, Labasses C, Dobru JM *et al*. Acquired auditory agnosia in childhood and normal sleep electroencephalography subsequently diagnosed as Landau–Kleffner syndrome: a report of three cases. Dev Med Child Neurol 2013; 55(6): 575-9.
2. Conroy J, McGettigan PA, McCreary D, Shah N, Collins K, Parry-Fielder B *et al.* Towards the identification of a genetic basis for Landau-Kleffner syndrome. Epilepsia 2014; 55(6): 858-65.
3. Pearl PL, Carrazana EJ, Holmes GL, The Landau kleffner syndrome, Epilepsy Curr 2001; 1(2): 39-45.
4. Tuft M, Arva M, Bjornvold M, Wilson JA, Nakken KO. Landau-Kleffner syndrome. Tidsskr Nor Laegeforen 2015; 135: 2061-4.
5. Caraballo RH, Cejas N, Chamorro N, Kaltenmeier MC, Fortini S, Soprano AM *et al*. Landau-Kleffner syndrome: A study of 29 patients. Seizure 2014; 23: 98-104.
6. Titus JB. Neuropsychological Assessment of Children with Landau-Kleffner Syndrome. J Pediatr Epilepsy 2017; 6: 62-8.
7. Sanches Fernandez I, Liddenkemper T, Peters JM, Kothare SV *et al*. Electrical Status Epilepticus in Sleep: Clinical Presentation and Pathophysiology. Pediatr Neurol 2012; 47: 390-410.
8. Nieuwenhuis L, Nicolai J. The pathophysiological mechanisms of cognitive and behavioral disturbances in children with Landau–Kleffner syndrome or epilepsy with continuous spike-and-waves during slow-wave sleep. Seizure 2006; 15: 249-58.
9. Bhardwaj P, Sharma VK, Sharma R, Gautam P. Acquired epileptic aphasia: Landau-Kleffner syndrome. J Pediatr Neurosci 2009; 4(1): 52-3.
10. Robinson RO, Baird G, Robinson G, Simonoff E. Landau-Kleffner syndrome: course and correlates with outcome. Dev Med Child Neurol 2001; 43(4): 243-7.
11. Sasso A, Sindičić Dessardo N. Landau Kleffnerov sindrom – prikaz našeg bolesnika. Pediatr Croat 2009; 53(3): sažetak rada

Robert Perinčić

Na putu kući – „Vidljivo i nevidljivo u psihoterapiji“

/ *On the Way Home – “Visible and Invisible in Psychotherapy”*

Krajem 2018. godine Medicinska naklada objavila je knjigu **Na putu kući – „Vidljivo i nevidljivo u psihoterapiji“** autora **Roberta Perinčića.** Radi se lijepo uređenoj, tvrdo ukoričenoj knjizi izrazito privlačnog dizajna s omotnom stranicom koja mami čitatelja da knjigu uzme u ruke i prelista je. Knjiga je to od 339 stranica koja je podijeljena u četiri dijela, odnosno, kako autor navodi, u četiri knjige. Svaka od tih knjiga sadrži više dijelova. Tako se u prvoj knjizi nazvanoj „OKP“ – „Od najgoreg do najboljeg“, u prvom dijelu, iznose psihoterapijski primjeri (opisuju se razlozi javljanja psihijatru i tijek psihoterapije Anite, Branimira, Sanje, Patricije i Marka), a u drugom dijelu autor opisuje „unutarnjeg sabotera i njegove atribute – teoriju/prirodu/terapiju“. U drugoj knjizi nazvanoj „JA“ kroz četiri poglavlja autor „sa svih strana“ opisuje JA (self, sebstvo). U trećoj knjizi nazvanoj „Psihoterapija“ autor se pozabavio teorijskim i praktičnim pitanjima psihoterapije, uglavnom one zasnovane na psihodinamskim (psihoanalitičkim?) teorijama i školama. U četvrtoj knjizi naslovljenoj „Mikrosvijet i makrosvijest“ (vanjski obezvrijeđivači i saboteri) uglavnom se orijentira na opise djelovanja vanjskog svijeta na unutarnji svijet čovjeka, pacijenta.

U uvodnom dijelu autor opisuje kako je knjiga nastala, s kojim se dvojbama i problemima tijekom njezinog nastanka suočavao, a nasta-

At the end of 2018, Medicinska naklada published the book **On the Way Home – “Visible and Invisible in Psychotherapy”.** It is a nicely arranged hard cover book with a very attractive design and cover that invites the reader to pick it up and flip through its pages. The book is comprised of 339 pages divided into four sections or, as the author describes it, four books. Each one of these books is made up of multiple sections. The first book is entitled “OKP”- “Od najgoreg do najboljeg” (OCD, from worst to best). In the first section there are psychotherapeutic examples (Anita, Branimir, Sanja, Patricija, and Marko), in the second section the author describes the “inner saboteur and his attributes – theory/nature/therapy”. In the second book, entitled “JA” (“Me”), the author uses four chapters to describe Me (the self) “from all sides”. In the third book, called “Psihoterapija” (“Psychotherapy”), the author deals with theoretical and practical aspects of psychotherapy, mostly those based on psychodynamic (psychoanalytic?) schools and theories. In the fourth book, entitled “Mikrosvijet i makrosvijest” (Micro-world and macro-world) (outside discouragers and saboteurs), deals mostly with describing the outside world and its effects on the inner world of a person, the patient.

In the introduction the author describes how the book came to be, the doubts and problems he encountered during its making. The book is a result of many years’ work, of taking notes and la je kao plod višegodišnjeg rada i bilježenja asocijacija vezanih uz psihoterapijske procese i teorijska saznanja, te navodi da mu nije bila namjera pisati ni stručni ni pregledni rad (npr. o OKP-u) „nego samo zapisati iskustva, sadržaj, razmišljanja i spoznaje koje su proistekle iz susreta i rada s pacijentima“. I sam se začudio kada je vidio da je zapisao puno više nego što je u početku namjeravao. Sadržaje je širio na osnovi onoga što je saznavao od pacijenata i što im je davao, ali i na osnovi literature koja mu je, kako iz svega proizlazi, „kruh svagdašnji“. Rad s pacijentima s jedne strane i dobar uvid u literaturu s druge strane međusobno su se prožimali, pretapali i tako rađali tekstove koji su kao cjelina sabrani u ovoj knjizi.

Autor posebno naglašava, a isto se može iščitati iz cijele knjige, da mu je bila želja ukazati i na „neke štetne neistine na koje tražitelji (psihijatrijske) pomoći nailaze na raznim internetskim portalima i forumima, pa i kod osoblja u medicinskim i vjerskim institucijama.“ Anticipirajući na neki način eventualne primjedbe na knjigu, autor upozorava kako će neki pristupi i dijelovi knjige vjerojatno smetati akademskoj zajednici zbog „nedovoljno stručnog načina izražavanja, citiranja duhovnih sadržaja, prepletanja duhovnosti i psihoterapije“. U ovom kontekstu kratko se osvrće na „visoko stručne“ knjige koje prosječnog čitatelja, jer ih teško razumije, obeshrabruju, te dodaje da je „ova knjiga pisana istoj populaciji s kojom se svakodnevno susreće u psihoterapijskoj praksi“. Dodaje da nije zanemario stručnu bazu podataka za one koji bi htjeli saznati više. Na kraju knjige popis je literature i „filmografija“. Koristio je, dakle, 83 knjige iz raznih područja koja govore o psihičkom i ljudskom bivstvovanju u svijetu – tu su knjige iz psihoterapije, psihologije, filozofije, antropologije, duhovnosti, religije itd. Interesantan je i popis (filmografija) 28 filmova koje autor navodi kao „literaturu“ kojom se služio pišući ovu knjigu odnosno koje na neki način preporuča „onima koji žele više znati“.

keeping a record of associations related to the psychotherapeutic process and theoretical findings. His aim was not to write a professional or review paper (e.g. about OCD) but rather “to record experiences, content, thoughts, and discoveries which came from work with patients”. He was himself surprised when he realized that he had written a lot more than initially intended. The content of his writing broadened based on what he discovered from his patients and what he imparted to them, but also based on literature, which was, as it appears, his “daily bread”. Work with patients on the one hand and good insight into literature on the other conjointly pervaded and combined gave rise to the texts which are as a whole assembled in this book.

The author emphasizes, and this can be construed from the entire book, that his desire is to point out “some of the harmful untruths that those seeking (psychiatric) help may come across on various web portals and forums, and even from medical personnel and religious institutions”. Anticipating in some way possible objections to the book, the author warns that parts of the book and some of the approaches will probably bother the academic community due to the “insufficiently expert terms and use of expressions, citing spiritual content and the interlacing of spirituality and psychotherapy”. In the context of this, he shortly reviews “highly expert” books which to the average reader are discouraging because they are hard to understand., adding that “this book is written for the same population which he encounters in his everyday psychotherapeutic practice”. He further adds that he did not neglect expert data bases for those who would like to learn more. At the end of the book there is a bibliography and a “filmography”. He used 83 books from different fields dealing with the psychological and human condition in the world. This includes books on psychotherapy, psychology, philosophy, anthropology, spirituality, religion, etc. Also of interest is the filmography, a list of 28 films which the author lists as “literature”, which he used

Uz ovu knjigu dr. Roberta Perinčića javlja se više asocijacija od kojih neke ne mogu ne spomenuti. Prva asocijacija je ona da jedan psihijatar, psihoterapeut „iz provincije“ (Robert Perinčić je psihijatar, psihoterapeut koji prije deset godina napušta mjesto šefa psihijatrije u Zadru i u svom gradu, Zadru, otvara vlastitu psihijatrijsko-psihoterapijsku ordinaciju), nepovezan s akademskom zajednicom, gotovo samački prelistava svoje bilješke o psihoterapijskim procesima svojih pacijenata, literaturu (impresionira širina autorovih interesa i uvida u literaturu) i piše knjigu koja bi, barem po nekim njezinim dijelovima, mogla postati knjigom na koju će se u budućnosti pozivati autori sličnih radova. Druga asocijacija je autorov pozitivan, no nikako ne naivan pristup problemima s kojima se susreće u svom svakodnevnom radu, ali i u literaturi i životu. Nadalje, uz pohvalu navedenu u prvoj asocijaciji, javlja se i ona koja ima kritičan pristup, a to je da je s „još malo truda“ od ove knjige trebao napraviti najmanje dvije knjige: jednu o onom unutarnjem svijetu, njegovim problemima i razrješavanju tih problema psihoterapijskim zahvatima, a drugu o vanjskom (makro) svijetu i egzistenciji fragilnog, modernog čovjeka u njemu.

I, asocijacija koja je prisutna tijekom cijelog čitanja knjige i pisanja ovog prikaza, prava je sreća da ovdje opisano iskustvo i izneseno znanje nisu ostali neobjavljeni javnosti.

Predviđam da će ova knjiga naići na dobar odjek kod čitatelja. To su u prvom redu psihijatri i psihoterapeuti svih provenijencija. Svakako je interesantna intelektualcima humanističke orijentacije, ali i svima drugima, posebno obrazovanijoj kategoriji onih koji imaju određene psihičke tegobe. Njima je, čini se, i namijenjena. Oni, kao i svi drugi, čitajući je, „doći će na svoje“. Zbog svega preporučujem da ju se čita.

Vlado Jukić

in writing this book and, in a way, recommends “to those who want to learn more”.

This book by Dr Roberta Perinčić gives rise to many associations, some of which I must mention. The first association is that a “provincial” psychiatrist and psychotherapist (Robert Perinčić is a psychiatrist and psychotherapist who left his workplace ten years ago as head of psychiatry in Zadar, his home town, and opened his own practice as a psychiatrist/psychotherapist). With no ties to the academic community and of his own accord, using his notations about the psychotherapeutic processes of his patients and literature (with an impressive range of interests and insight into literature) he wrote a book which could, at least in part, become one that future authors of similar works will call upon. The second association is the author’s positive, but in no way naive, approach to problems which he faces in his everyday work, in literature and in life. Furthermore, along with praises held in the first association, there is one with a more critical approach; that with a “little more effort” the book should have been at least two books: one about the inner world, its problems, and working through these problems through psychotherapy, and the other about the outside (macro) world and the existence of the fragile, modern man in it.

Finally, an association present throughout reading the book and writing this review: we are fortunate that the experiences described and knowledge conveyed here did not stay unpublished.

I predict that this book will be favourably received by the reader. In the first place, by those who are psychiatrists and psychotherapists of different provenance. It will surely be interesting to intellectuals oriented towards the humanities and social sciences, and to all those with certain mental difficulties, especially if they are more educated, for it seems as though it is a book intended for them. In reading the book they will, as will all other readers, “find their place”. For all these reasons I recommend reading this book.

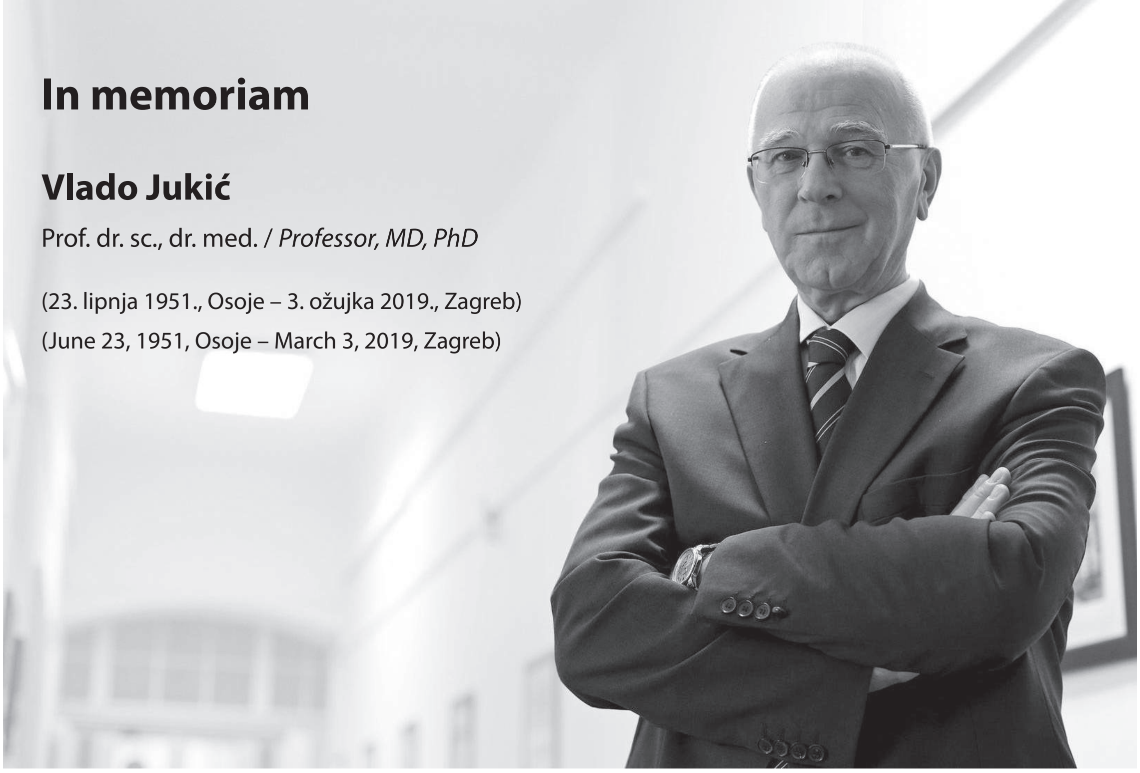
Vlado Jukić

In memoriam

Vlado Jukić

Prof. dr. sc., dr. med. / *Professor, MD, PhD*

(23. lipnja 1951., Osoje – 3. ožujka 2019., Zagreb)
(June 23, 1951, Osoje – March 3, 2019, Zagreb)



TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.129

Umro je Vlado Jukić. Naglo i iznenadno. Te riječi zvuče nestvarno, a ta se činjenica čini nemogućom. No ipak je to stvarno i to se dogodilo. Zauvijek nas je napustio prof. dr. sc. Vlado Jukić. Otišao je onako kako je i živio, radio, razmišljao – žestoko i brzo. A nas je sve ostavio u nevjerici i šoku.

Vlado Jukić rođen je 23. lipnja 1951. godine u malom hercegovačkom selu Osoje pokraj Posušja, od petero djece, kao 3. dijete majke Jage i oca Dominika. U obližnjem Posušju završio je osnovnu školu i gimnaziju.

Godine 1970. upisao se na Medicinski fakultet Sveučilišta u Zagrebu, na kojemu je diplomirao 1976. Nakon završenog obveznog liječničkog staža u Medicinskom centru Koprivnica, kratkotrajno je radio u Domu zdravlja Poreč i Medicinskom centru Sisak.

Godine 1978. zaposlio se u Neuropsihijatrijskoj bolnici „Dr. Ivan Barbot“ u Popovači, gdje je 1979. započeo, a 1982. završio specijaliza-

Vlado Jukić has died. Suddenly and shockingly. These words sound unreal, and this fact seems impossible. But they are true, and this has really happened. Prof Vlado Jukić, MD, PhD, has left us forever. He departed the way he lived, worked and thought – quickly and intensely – leaving all of us in shock and disbelief.

Vlado Jukić was born on June 23, 1951 in the small Herzegovienian village of Osoje near Posušje as the third of five children of his mother Jaga and father Dominik. He finished primary and secondary school in the nearby town of Posušje.

In 1970 he enrolled at the University of Zagreb Medical School, from which he graduated in 1976. After completing his mandatory medical residency at the Koprivnica Medical Centre, he briefly worked at the Poreč Medical Centre and Sisak Medical Centre.

In 1978 he started working at the Dr Ivan Barbot Neuropsychiatry Hospital in the town of Popovača, where he started his residency in psychiatry in 1979 and finished it in 1982. He often said ciju iz psihijatrije. Često je govorio kako ga je psihijatrija zanimala još od studentskih dana. Želio je pomagati osobama s duševnim smetnjama ne samo kao liječnik. To je dokazivao tijekom cijeloga radnog vijeka. Znao je reći „za te ljude treba se boriti, jer često oni to sami ne mogu“. Poznate su njegove borbe s administracijama i sustavima u kojima je izvojevao i mnoge pobjede. Tako je „vratio“ na posao shizofrenog bolesnika koji je dobio otkaz, a kasnije ga i „umirovio“. Omogućio je promjenu oporuka kojima su duševni bolesnici izostavljeni iz nasljeđivanja. Pomogao je da shizofreni bolesnik koji je u stanju neubrojivosti usmrtio majku naslijedi obiteljsku mirovinu. I još mnogo, mnogo toga.

U Kliniku za psihijatriju KBC-a Zagreb prelazi 1986., najprije u Centar za krizna stanja, a potom na Odjel muške psihijatrije. Godine 1994. prelazi u Psihijatrijsku bolnicu Vrapče i postaje njezin ravnatelj. Pod njegovim vodstvom Bolnica se obnavlja i mijenja nazive, prvo u Klinička psihijatrijska bolnica Vrapče, a zatim u Klinika za psihijatriju Vrapče. Po riječima njegove zamjenice, doc. dr. sc. Petrane Brečić, ali i svih kolega u toj ustanovi, bio je „najuspješniji i najdugovječniji vrapčanski ravnatelj“.

U 25 godina on je izgradnjom, dogradnjom i adaptacijom zgrada u potpunosti izmijenio arhitektonsku sliku Bolnice. Obnovio ju je iz temelja i izgradio nove zgrade. Tako je, kronološki gledano, izgrađena plinska kotlovnica, obnovljene su zgrade „šestice“ i „petice“, dograđena je i adaptirana zgrada „četvorke“. Zatim je sanirana glavna zgrada, ulaz u Bolnicu („kameni portal“), obnovljena „devetka“ i “jedanaestica“. Poslije su izgrađene galerija „Slava Raškaj“ i kapelica, adaptirana je velika bolnička dvorana u Centar za edukaciju, obnovljene su „osmica“ i zgrade u kojima su smješteni Centar za radno-okupacijsku terapiju i rehabilitaciju te Muzej bolnice Vrapče. Posljednji sagrađen Zavod za forenzičku psihijatriju otvoren je potkraj 2018. godine. Uz njegovo je otvaranje

psychiatry interested him ever since he was a student of medicine. He wanted to help people with mental issues, not just as a physician. He demonstrated that throughout his career. Prof Jukić was known to say “we have to fight for these people, because they cannot do it on their own”. His battles with administration and systems are well-known, and he won many victories. Among them are successfully returning a schizophrenic patient to work after he had been fired and then arranging his retirement later on. He worked on changing last wills and testaments where mental health patients were left out of the inheritance. He helped a schizophrenic patient who killed his mother in a mentally unsound state inherit the family pension, and many, many other people besides.

He transferred to the Psychiatry Clinic of the Zagreb Clinical Hospital Centre in 1986, initially to the Crisis Centre and later to the Male Psychiatry Ward. Under his leadership, the Hospital was renovated and changed its name, first to the Vrapče Clinical Psychiatric Hospital and then to the Vrapče Psychiatry Clinic. According to the words of his deputy director, Dr Petrana Brečić, MD, PhD, but also all his colleagues in that institution, he was the “most successful and longest-acting director of the Vrapče Psychiatry Clinic”.

Over 25 years in which he built, expanded and adapted hospital buildings, he completely changed the architectural picture of the Hospital. He renovated it from the very foundations and added new buildings. Chronologically listed, this included the construction of the boiler house, renovations of buildings “six” and “five” and expansion and adaptation of building “four”. This was followed by refurbishment of the main building and the entrance to the Hospital (the “stone portal”) and renovation of buildings “nine” and “eleven”. Later on, the Slava Raškaj Gallery and chapel were built, the great hospital hall was adapted to be the Education Centre and building “eight” and the buildings housing the Centre for Occupational Therapy and Rehabilitation as well as the Vrapče Hospital Museum were renovated. Finally, the Institute for Forensic Psychiatry was opened near the end of 2018. To accompany the opening of the institute, Prof Jukić organized an prof. Jukić organizirao međunarodni simpozij na temu forenzičke psihijatrije na početku 21. stoljeća, u okviru kojega je održan i okrugli stol o forenzičkoj psihijatriji u Hrvatskoj. To je smatrao „vrhuncem svoje stručne karijere".

Da je samo obnovio i izgradio Bolnicu bio bi uspješan. Ali, on je bio veliki ravnatelj jer je unaprijedio sve aktivnosti Bolnice, profilirao ju je kao u mnogočemu najznačajniju psihijatrijsku ustanovu u nas. Zapošljavao je mlade, omogućavao im specijalizacije, usavršavanja, edukacije. Poticao je stručni i znanstveni rad. Brojnim kolegama omogućio je izbor u znanstvena i znanstveno-nastavna zvanja. Pozivao je na objavljivanje radova, sudjelovanje na stručnim skupovima, medijske istupe. Na godišnjicu osnivanja bolnice (15. studenoga) godinama je organizirao uspješne stručne i znanstvene skupove koji su popraćeni i zbornikom radova. Neke od tih knjiga su i danas tražena literatura. Također je organizirao tribine Film i psihijatrija, koje su poprimile kultni status. Osnovao je i Muzej Bolnice Vrapče.

Završio je poslijediplomski studij iz Forenzičke psihijatrije (1980.-1981.) i odslušao sva predavanja na poslijediplomskim studijima iz psihoterapije i socijalne psihijatrije (1980.-1982.). Završio je edukaciju iz grupne psihoterapije (kod prof. E. Klaina, 1978.-1986.) te obiteljsku psihoterapiju (kod doc. Vlatković, 1986.-1989.).

Magistrirao je 1989. godine s temom „Prekid stacionarnog liječenja i čuvanja psihički abnormalnih delinkvenata" (mentor prof. dr. sc. Rudolf Turčin). Doktorirao je s temom „Utjecaj stresova na kliničku sliku posttraumatskog stresnog poremećaja u hrvatskih ratnih stradalnika" (mentor prof. dr. sc. Eduard Klain) 1997. godine.

Na Medicinski fakultet Sveučilišta u Zagrebu aprimljen je kao asistent 1990. u tadašnju Katedru za psihijatriju i medicinsku psihologiju (danas Katedra za psihijatriju i psihološku

international symposium on the topic of forensic psychiatry at the start of the 21st century, which included a round table discussion on forensic psychiatry in Croatia. He considered this "the peak of his professional career".

If he had just renovated and built the Hospital, he would have been considered a successful director. But he was a truly great hospital director because he also improved all hospital activities and established it as the in many ways most significant psychiatric institution in the country. He employed young people and enabled them to get residencies, training and education. He encouraged expert and scientific engagement. There were numerous colleagues whom he helped in selection for scientific and teaching positions. He encouraged publication of papers, participation on scientific conferences and engagement in the media. On the anniversary of the foundation of the Hospital (November 15) he successfully organized annual expert and scientific conferences that were accompanied by a book of conference proceedings. Some of these books are still popular and sought-after today. Additionally, he organized a series of public discussions, Film and Psychiatry, which achieved cult status. He also founded the Vrapče Hospital Museum.

Prof Jukić completed his postgraduate studies in Forensic Psychiatry (1980-1981) and attended all the lectures at the postgraduate courses in psychotherapy and social psychiatry (1980-1982). He completed education courses in group psychotherapy (with Prof E. Klain, 1978-1986) and family psychotherapy (with Assistant Prof Vlatković, 1986-1989).

He won his master's degree in 1989 with the title "Ending Infirmary Treatment and Safeguarding Psychologically Abnormal Delinquents" (mentored by Prof Rudolf Turčin, MD, PhD). His doctoral thesis was titled "Influence of Stresses on the Clinical Picture of Posttraumatic Stress Disorder in Croatian War Victims" (mentored by Prof Eduard Klain, MD, Phd) and was completed in 1997.

The University of Zagreb Medical School appointed him as an instructor in 1990 at the Department of Psychiatry and Medical Psychology (today called the Department of Psychiatry and medicinu). Docent je postao 1998., izvanredni profesor 2004., redoviti profesor 2010., a redoviti profesor u trajnom zvanju 2016.

Na Medicinskom fakultetu u Zagrebu sudjelovao je u dodiplomskoj nastavi predmeta „Psihijatrija“, „Medicinska etika“, „Ratna medicina“, „Forenzička psihijatrija“. Bio je voditelj predmeta „Psihologija sestrinstva“ na Studiju sestrinstva.

U poslijediplomskoj nastavi sudjelovao je u više predmeta poslijediplomskih studija „Forenzična psihijatrija“ (od 1998. do 1999.), „Psihoterapija“ (od 1998.), „Socijalna psihijatrija“ (od 1998. do 2004.), „Menadžment u zdravstvu“ (od 2000.). „Klinička farmakologija“ (od 1998.), „Opće kompetencije liječnika specijalista“ (od 2014.). U poslijediplomskom specijalističkom studiju „Psihijatrija“ (od 2014.) bio je nositelj predmeta „Bolesti ovisnosti“, „Forenzička psihijatrija“ i „Povijest psihijatrije“.

Na Pravnom fakultetu Sveučilišta u Zagrebu, na studiju socijalnog rada bio je nositelj predmeta „Socijalna psihijatrija“ i „Socijalni rad s ovisnicima“, a na Edukacijsko-rehabilitacijskom fakultetu Sveučilišta u Zagrebu nositelj kolegija „Forenzička psihijatrija“. Na Hrvatskim studijima Sveučilišta u Zagrebu na studiju psihologije bio je nositelj kolegija „Opća psihopatologija“ i „Specijalna psihopatologija“ te izbornog kolegija „Forenzička psihijatrija“.

Na Zdravstvenom veleučilištu Zagreb bio je nositelj kolegija „Menadžment u zdravstvu“ (od 2007. do 2015.).

Na Medicinskom fakultetu Sveučilišta u Mostaru sudjelovao je u dodiplomskoj i poslijediplomskoj nastavi te je bio predsjednik Etičkog povjerenstva i član Povjerenstva za ocjenu magistarskih radova i doktorskih disertacija.

Na Filozofskom fakultetu Sveučilišta u Zagrebu u studiju „Klinička psihologija“ bio je nositelj predmeta „Biološki pristupi u liječenju psihijatrijskih bolesti“ od 2011. Na Farmaceutsko-biokemijskom fakultetu Sveučilišta u Zagrebu

Psychological Medicine). He became an assistant professor in 1998, an associate professor in 2004, a full professor in 2010 and a tenured full professor in 2016.

At the Zagreb Medical School he participated in teaching on the graduate courses Psychiatry, Medical Ethics, War Medicine and Forensic Psychiatry. He was head of the Psychology in Nursing course at the Nursing Studies.

Prof Jukić participated in teaching numerous postgraduate courses: Forensic Psychiatry (1998-1999), Psychotherapy (from 1998), Social Psychiatry (1998-2004), Management in Healthcare (since 2014). As part of the Psychiatry postgraduate specialization programme (since 2014) he headed the courses Diseases of Addiction, Forensic Psychiatry and History of Psychiatry.

As part of the social work studies at the University of Zagreb Faculty of Law, he headed the Social Psychiatry and Social Work with Addicts courses, and at the Faculty of Education and Rehabilitation Sciences he headed the Forensic Psychiatry course. At the University of Zagreb Centre for Croatian Studies psychology course he headed General Psychopathology and Special Psychopathology courses and the elective Forensic Psychiatry course.

At the Zagreb Health Studies, he headed the Management in Healthcare course (from 2007 to 2015).

Prof Jukić also participated in graduate and postgraduate teaching at University of Mostar Medical School and was the president of the Ethics Committee and a member of the Commission for the Evaluation of Master Theses and Doctoral Dissertations.

At the University of Zagreb Faculty of Humanities and Social Sciences, he headed the course Biological Approaches in the Treatment of Psychiatric Illnesses as part of the Clinical Psychology study programme since 2011. At the University of Zagreb Faculty of Pharmacy and Biochemistry as part of the Clinical Pharmacy study programme, he headed the course Pharmacotherapy of Mental Illnesses and Disorders.

At his alma mater, he was the secretary of the Department of Psychiatry and Psychological Medicine na studiju „Klinička farmacija“ bio je nositelj predmeta „Farmakoterapija duševnih bolesti i poremećaja“.

Na matičnom je fakultetu bio tajnik Katedre za psihijatriju i psihološku medicinu (1991.-1994.), član Fakultetskog vijeća (1996.-1998.), član Odbora za studentski standard (1996.-1998.), član Etičkog povjerenstva (1998.-2002.), član Odbora za sudska mišljenja (2002.-2006.), član Povjerenstva za stegovni postupak (od 2012.), pomoćnik pročelnika Katedre i voditelj nastave za predmet „Psihijatrija“ u Klinici za psihijatriju Vrapče (od 2010.).

Bio je mentor u brojnim studentskim diplomskim radovima, magisterijima i doktoratima. Smrt ga je prekinula u mentorstvu tri doktorska rada.

Publicistička je aktivnost prof. Jukića impresivna. To je na neki način i logično, jer je iz njega neprestano izvirala ljubav za pisanom riječju. Knjige je čitao, volio, kupovao. Još kao student obožavao je u antikvarijatima tragati za nekom knjigom, pronaći je i kupiti ili samo rezervirati. Od skromnih studentskih prihoda uspijevao je odvojiti dio novaca kako bi kupio neku sebi važnu knjigu. Kasnije je kupovao sve više knjiga i za obiteljsku i za knjižnicu Bolnice. Pisao je puno i poticao druge da pišu.

Iza sebe je ostavio više od 250 stručnih i znanstvenih radova, u domaćim i međunarodnim časopisima, zbornicima i knjigama, više od 100 priopćenja na stručnim skupovima i kongresima te 24 poglavlja u udžbenicima. Objavljene su mu tri monoautorske knjige: Hrvatska psihijatrijska publicistika (2014.), Izgradnja, dogradnje i adaptacije zgrada i drugih infrastrukturnih objekata bolnice Vrapče od 1977. do 2014. godine (2015.) i Psihijatrijske teme za nepsihijatre (2018.). Urednik je 16 stručnih knjiga (među njima i nekoliko temeljnih udžbenika) te 5 popularnoznanstvenih knjiga. Bio je član Uredničkog vijeća Leksikona odgojno-obrazovnih znanosti (2017.).

(1991-1994), a member of the Academic Council (1996-1998), the Committee for Student Standards (1996-1998), the Ethics Committee (1998-2002), the Committee for Court Expert Opinions (2002-2006), a member of the Commission for Disciplinary Procedures (since 2012), Department Head Assistant and course head for the Psychiatry course at the Vrapče Psychiatry Clinic (since 2010).

Prof Jukić mentored numerous student graduation theses, master theses and doctoral dissertations. His death interrupted him in the mentorship of three doctoral dissertations.

The publishing activities of Prof Jukić are impressive. In a way this is to be expected, since he constantly exuded love for the written work. He read, loved and bought books. Even as a student, he loved searching through antique bookshops for a book, finding it and buying or just reserving it. He would always somehow manage to dedicate a part of his meagre student earnings to buying himself an important book. Later he bought more and more books for his family library and the Hospital library as well. He wrote much, and encouraged others to write.

Prof Jukić leaves behind more than 250 professional and scientific papers, published in Croatian and in international journals, conference proceedings and books, more than 100 presentations from conferences and congresses as well as 24 chapters in course books. He published three books as the sole author: Croatian Psychiatric Publishing (2014), Building, Expanding and Adapting Buildings and Other Infrastructural Objects at Vrapče Hospital from 1977 to 2014 (2015) and Psychiatric Topics for Non-psychiatrists (2018). He was an editor for 16 professional books (including a few fundamental course books) and 5 popular science books. He was a member of the Editorial Board of the Lexicon of Education Sciences (2017).

He was also one of the editors of the translation of Jaspers’ General Psychopathology (2015), a diagnostic and statistical handbook for mental disorders, fifth edition (DSM-5, 2014), and the MMSE-2 Handbook (2011). Just before he underwent his operation, he managed to com-

Jedan je od urednika i prijevoda Jaspersove „Opće psihopatologije“ (2015.), Dijagnostičkog i statističkog priručnika za duševne poremećaje, peto izdanje (DSM-5, 2014.) te Priručnika MMSE-2 (2011.). Neposredno prije nego što je otišao na operaciju uspio je završiti tri rukopisa i uputiti ih u Medicinsku nakladu, kao da je slutio da je smrt toliko blizu.

Napisao je recenzije za više od 30 knjiga i udžbenika.

Bio je član uredništava časopisa „Socijalna psihijatrija“ (od 1994.), „Farmaka“ (1998.-2008.), „Klinička psihologija“ (od 2008.), PLIVAmed.net (od 2014.), „Psychiatria Danubina“ i „Psihoterapija“ (od 2016.). Recenzirao je brojne radove za domaće i međunarodne časopise.

Za „Socijalnu psihijatriju“ bio je posebno vezan. „Otkrio“ ju je na studiju, pretplatio se kao mladi liječnik, prve radove objavio je u njoj. Godine 1994. postao je član uredništva i bio među najaktivnijima u tom društvu. U dvadesetogodišnjem razdoblju objavio je najviše članaka u „Socijalnoj psihijatriji“, a vrlo je vjerojatno da je to časopis u kojemu je najčešće i objavljivao svoje radove. Njegovi su rukopisi bili prepoznatljivi, detaljni, s puno podataka, dodataka i fusnota. Te su fusnote katkad bile (pre)duge pa bi ga tehnička urednica našeg časopisa znala zamoliti da od nekih fusnota odustane ili da ih skrati. On je tada rekao kako je sve to važno i da teško može nešto izostaviti. Kao ravnatelj Bolnice (Klinike) poticao je kolege i suradnike da objavljuju u časopisu, a istovremeno je i financijski pomagao njegovo izlaženje. On se zalagao da „Socijalna psihijatrija“ postane službeno glasilo Hrvatskog psihijatrijskog društva te je s pozicije njegova predsjednika pomagao tiskanje časopisa. Bez te pomoći časopis bi se u jednom razdoblju vjerojatno „ugasio“, ali zahvaljujući prije svega prof. Jukiću uspio se održati i nastaviti kontinuirano izlaziti.

Bavio se svakodnevnim kliničkim radom psihijatra praktičara (bio je supspecijalist iz biologij-

plete three manuscripts and send them to the “Medicinska naklada” publishing house, as if he had suspected that death was close at hand.

He wrote reviews for more than 30 books and course books.

He was a member of the Editorial Board of the following journals: Social Psychiatry (from 1994), “Farmaka” (1998-2008), Clinical Psychology (from 2008), PLIVAmed.net (since 2014), Psychiatria Danubina and “Psihoterapija” (since 2016). He peer-reviewed numerous manuscripts for Croatian and international journals.

Prof Jukić was especially attached to the Social Psychiatry journal. He “discovered” it as a student, subscribed to it as a young physician and published his first papers in this journal. He became a member of the Editorial Board in 1994 and was among the most active members. Over the twenty or so years of his career, it was in this journal that he published the highest number of papers and it is very likely that this was the journal where he published most often. His manuscript submissions were easily recognizable, with a wealth of details, data, appendixes and footnotes. These footnotes were sometimes (too) long, and the technical editor of our journal would sometimes ask him to remove or shorten these footnotes. He would then say that all of it was important and that he can hardly leave anything out. As the director of the Vrapče Hospital (Clinic), he encouraged colleagues to publish in the Social Psychiatry journal and provided financial support to the journal as well. He worked to make Social Psychiatry the official journal of the Croatian Psychiatric Association and assisted the publication of the journal as the president of the association. Without his help, it is likely that publication of the journal would have stopped at some point, but primarily thanks to Prof Jukić it has survived and continuously publishes new issues.

Prof Jukić performed the everyday duties of a practicing psychiatrist (he was a subspecialist in biological psychiatry) and forensic expert (he was a long-serving expert court witness and subspecialist in forensic psychiatry). He fought for the de-stigmatization of mental issues, psychiatric patients and members of their families. He parske psihijatrije) i forenzičara (bio je dugogodišnji sudski vještak i supspecijalist iz forenzičke psihijatrije). Zalagao se za destigmatizcaiju psihičkih smetnji, duševnih bolesnika i članova njihovih obitelji. Sudjelovao je u promjeni postojećih i donošenju novih zakona i pravilnika koji su regulirali prava duševnog bolesnika. Bio je pokretač ideje o proglašenju 6. lipnja Danom prava osoba s duševnim smetnjama.

Organizirao je brojne skupove i kongrese. Najvažniji su Ratna psihologija i psihijatrija (predsjednik organizacijskog odbora), Zdravstveni problemi žrtava zlostavljanja u zatvorima i koncentracijskim logorima agresora u ratu protiv Hrvatske 1991./92. godine (član stručnog i organizacijskog odbora), 1. hrvatski psihijatrijski kongres (tajnik), 2., 3. i 4. hrvatski psihijatrijski kongres (član stručnog i organizacijskog odbora), 5. hrvatski psihijatrijski kongres (dopredsjednik), 6. i 7. hrvatski psihijatrijski kongres (predsjednik), 1. do 7. hrvatski psihijatrijski dani (član stručnog odbora), 8. do 15. hrvatski psihijatrijski dani (predsjednik stručnog i organizacijskog odbora), 1. do 12. mostarske psihijatrijske subote (član stručnog odbora).

Bio je član Hrvatskog liječničkog zbora, član stručnih društava HLZ-a (za kliničku psihijatriju, psihoterapiju, forenzičku psihijatriju, biologijsku psihijatriju i kliničku psihofarmakologiju, za alkoholizam i druge ovisnosti, za Alzheimerovu bolest), član Hrvatskog katoličkog liječničkog društva, član *European Psychiatrists Association* (EPA), *International Society for the Investigation of Stress* (ISIS), član svjetskog društva za biologijsku psihijatriju, predsjednik Crvenog križa Grada Zagreba (od 2012.), član Odbora za neuroznanost i bolesti mozga pri Razredu za medicinske znanosti HAZU (od 2015.), redoviti član Akademije odgojno obrazovnih znanosti Hrvatske (od 2017.), redoviti član Akademije medicinskih znanosti Hrvatske (od 2018.).

Za psihijatre i sve druge djelatnike u psihijatriji učinio je mnogo, a osobito kada je obnašao dužnost predsjednika Hrvatskog psihijatrijskog

ticipated in changing existing laws and rules and making new ones regulating the rights of psychiatric patients. He was the initiator of the idea to pronounce the 6th of June as the Rights of Persons with Mental Issues Awareness Day.

He organized numerous conferences and congresses. The most important ones were War Psychology and Psychiatry (president of the organization committee), Health Problems in Victims of Abuse in Prisons and Concentration Camps of the Aggressor in the War against Croatia 1991/92 (member of the expert and organization committee), 1st Croatian Psychiatric Congress (secretary), 2nd, 3rd and 4th Croatian Psychiatric Congress (member of the expert and organization committee), 5th Croatian Psychiatric Congress (vice-president), 6th and 7th Croatian Psychiatric Congress (president), 1st to 7th Croatian Psychiatric Days (member of the expert committee), 8th to 15th Croatian Psychiatric Days (president of the expert and organization committees), 1st to 12th Psychiatric Saturday in Mostar (member of the expert committee).

He was a member of the Croatian Physicians Association (CPA) and a member of CPA's expert societies (for clinical psychiatry, psychotherapy, forensic psychiatry, biological psychiatry and clinical psychopharmacology, for alcoholism and other addictions, for Alzheimer's disease), a member of the Croatian Catholic Medical Society, a member of the European Psychiatrists Association (EPA), the International Society for the Investigation of Stress (ISIS), the World Federation of Societies of Biological Psychiatry, the president of the City of Zagreb Red Cross (since 2012), a member of the Board of Neuroscience and Brain Diseases at the Department of Medical Sciences of the Croatian Academy of Sciences and Arts (since 2017) and a regular member of the Croatian Academy of Medical Sciences (from 2018).

Prof Jukić achieved much in helping psychiatrists and other psychiatry workers, especially while holding the position of the president of the Croatian Psychiatric Association (from 2010 to 2018). He was a member of the Committee for the Reorganization of Psychiatric Services in Croatia (1998-2001) and a working group of the same name (since 2001), as well as the State Committee društva (od 2010. do 2018.). Bio je i član Povjerenstva za reorganizaciju psihijatrijske službe u Hrvatskoj (1998.-2001.) i istoimene radne skupine (od 2001.), Državnog povjerenstva za zaštitu osoba s duševnim smetnjama (1998.-2015.), član Komisije za stručni nadzor Hrvatske liječničke komore (od 2005.), član povjerenstva Gradskog ureda za zdravstvo (i socijalnu skrb) za programe prevencije ovisnosti (1997.-2014.), član Savjeta za zdravlje Gradske skupštine Grada Zagreba (2010.-2015.), član Povjerenstva za psihijatriju Ministarstva zdravstva (u svim mandatima, od 1996. do 2018.)., član povjerenstva Ministarstva zdravstva za dodjelu zvanja primarijus (2004.-2011.), član povjerenstva (grupe za planiranje ljudskih resursa) Ministarstva zdravstva za izradu strategije razvoja zdravstva od 2012. do 2020. (od 2012.), član i predsjednik povjerenstva za izradu i praćenje provedbe strategije za zaštitu mentalnog zdravlja Ministarstva zdravstva (2017.-2018.), predsjednik povjerenstva za izradu i praćenje provedbe Nacionalne strategije zaštite mentalnog zdravlja od 2018. do 2030. (od 2018.).

Bio je član Povjerenstva za lijekove od 1993. do 2000., član upravnog odbora HLZ-a - Podružnica Zagreb i predsjednik Zagrebačke podružnice HLZ-a od 2004. do 2009., član Glavnog odbora predsjedništva HLZ-a te predsjednik Suda časti Hrvatskog liječničkog zbora (od 2013., reizabran 2017.), predsjednik skupštine Hrvatske liječničke komore (2011.-2015.), član predsjedništva Udruge poslodavaca u zdravstvu (od 1999.), njezin predsjednik od 2003. do 2013., dopredsjednik od 2013. Bio je jedan od osnivača i prvi predsjednik „Hrvatskog društva za psihijatriju i pravo“ (2003.-2008.), član izvršnog odbora HDPP-a (2008-2015).

Tijekom Domovinskog rata bio je jedan od glavnih organizatora psihijatrijske službe. Od 1991. do 1992. bio je zamjenik, a od 1992. pročelnik Odjela za duševno zdravlje Glavnog stožera Ministarstva zdravstva RH. Od 1995. bio je član kriznog stožera Ministarstva zdravstva RH.

for the Protection of Persons with Mental Issues (1998-2015), a member of the Commission for the Expert Supervision of the Croatian Medical Chamber (from 2005), a member of the Committee of the City Office of Health (and social services) for Addiction Prevention Programs (1997-2014), a member of the Health Advisory Board of the Zagreb City Council (2010-2015), member of the Committee for Psychiatry of the Ministry of Health (in all the mandates, from 1996 to 2018), a member of the Ministry of Health committee for selecting chief physicians (2004-2011), a member of the committee (of the human resources planning group) of the Ministry of Health for the planning of the National Health Care Strategy 2012-2020 (from 2012), a member and the president of the commission for the development and monitoring of the implementation of the strategy for the protection of mental health of the Ministry of Health (2017-2018), the president of the committee for the development and monitoring of the implementation of the National Strategy for the Protection of Mental Health 2018-2030 (since 2018).

He was a member of the Committee on Medication from 1993 to 2000, a member of the Management Board of the CPA chapter in Zagreb and the president of the Zagreb CPA chapter from 2004 to 2009, a member of the Main Board of the presidency of the CPA and the president of the Court of Honour of the Croatian Physicians Association (from 2013, re-elected in 2017). He was the president of the Council of the Croatian Medical Chamber (2011-2015), member of the presidential committee of the Croatian Health Employers Association (from 1999), its president from 2003 to 2013 and vice-president since 2013. He was one of the founders and the first president of the Croatian Association for Psychiatry and Law (CAPL) and the member of the executive board of CAPL (2008-2015).

During the Homeland War he was one of the main organizers of psychiatric services. From 1991 to 1992 he was the deputy, and since 1992 the head of the Department for Mental Health of the General Staff of the Ministry of Health of the Republic of Croatia. In 1995 he was a member of the Crisis Staff of the Ministry of Health of the Republic of Croatia.

Zaslužio je mnoga priznanja: Spomenica domovinskog rata 1991., pohvala Predsjednika Republike dr. Franje Tuđmana za doprinos u obrani Domovine, medalja „Bljesak“, medalja „Oluja“, medalja „Ljeto 95“, odlikovanje Redom Danice Hrvatske s likom Katarine Zrinske (1996.), povelja, diploma, zahvalnica Ladislav Rakovac HLZ-a, Nagrada grada Zagreba 2008. godine.

Jedino što mu je bilo važnije od njegova posla bila je njegova obitelj. Supruga Branka, djeca Katarina, Mislav i Matija, unuci Juraj i Jona bili su mu radost i podrška. S njima je živio u skladu sa svojim vrijednostima. Nikad nije zaboravio od kuda potječe i uvijek je znao kamo ide. Krasila ga je nacionalna osviještenost, vjera, empatija i briga za bližnjega. Brinuo je za one koji pate, zalagao se za svakoga - i za psihijatra i za psihijatrijskog bolesnika.

Vlado Jukić je bio prije svega Čovjek. Bio je on i liječnik, psihijatar, forenzičar, primarijus, doktor znanosti, redoviti profesor u trajnom zvanju, ravnatelj, predsjednik Hrvatskog psihijatrijskog društva, autor i urednik knjiga, mentor i voditelj projekata. Ali, prije svega bio je dobar čovjek. I pošten čovjek. I velik.

Koliko god je sada teško svima koji smo ga poznavali i s njim surađivali, koliko god smo sada tužni, možemo biti nadasve ponosni što smo živjeli s njim. On je svoj san ostvario, a mnogo je nas, njegovih suradnika, bolesnika, prijatelja, bilo dijelom toga sna.

Neki ljudi ne mogu umrijeti, jer su ostavili toliko dubok trag u srcima onih s kojima su živjeli, jer su ostavili toliko velika i snažna djela kroz koja će i dalje živjeti. Ti si, dragi Vlado, jedan od tih besmrtnih ljudi.

Zato, za sve što si napravio za hrvatsku psihijatriju, za hrvatsku psihijatrijsku publicistiku, za svoje Vrapče, za svoju Hrvatsku i za sve nas prijatelje, neka ti je vječna hvala.

Anđa Raič i Dražen Begić

He received many awards and commendations: the Homeland War of 1991 Memorial, the Commendation of the President of the Republic Dr Franjo Tuđman for Contributions in the Defence of the Homeland, the “Bljesak” medal, the “Oluja” medal, the “Ljeto 95” medal, the Order of Danica Hrvatska with the Image of Katarina Zrinska (1996), the Ladislav Rakovac charter, certificate and letter of thanks of the CPA and the City of Zagreb Award in 2008.

The only thing that was more important to him than his work was his family. His wife Branka, his children Katarina, Mislav and Matija and grandchildren Juraj and Jona were a source of joy and support. He lived his life with them according to his values. He never forgot where he came from and always knew where he was going. Prof Jukić was marked by a patriotic sensibility, faith, empathy and care for his fellow man. He cared for those who suffered, and advocated for everyone – both psychiatrists and psychiatric patients.

Vlado Jukić was above all a Human Being. He was a physician, psychiatrist, forensic expert, chief physician, Doctor of Philosophy, tenured full professor, hospital director, the president of the Croatian Psychiatric Association, an author and editor of books and a mentor and project leader. But above all that, he was a good man. And an honest man. And a great one.

As hard as it is now for everyone who knew him and worked with him, as sad as we now are, we can be proud that we lived with him. He had achieved his dream, and many of us, his colleagues, patients, friends, were part of that dream.

Some people cannot die, because they have left such a deep mark on the hearts of those they have lived with, because they have left such great and powerful works that will live on. You, dear Vlado, are one of these immortals.

Thus, for everything you have done for Croatian psychiatry, for Croatian psychiatric publishing, for your Vrapče Hospital, for your Croatian homeland and for us your friends, we will be eternally grateful.

Anđa Raič i Dražen Begić

Upute autorima

O časopisu

Socijalna psihijatrija je recenzirani časopis koji je namijenjen objavljivanju radova iz područja socijalne psihijatrije, ali i iz kliničke psihijatrije i psihologije, biologijske psihijatrije, psihoterapije, forenzičke psihijatrije, ratne psihijatrije, alkohologije i drugih ovisnosti, zaštite mentalnog zdravlja osoba s intelektualnim teškoćama i razvojnim poremećajima, epidemiologije, deontologije, organizacije psihijatrijske službe. Praktički nema područja psihijatrije iz kojeg do sada nije objavljen pregledni ili stručni rad.

Svi radovi trebaju biti pisani na hrvatskom i engleskom jeziku.

Svi zaprimljeni radovi prolaze kroz isti proces recenzije pod uvjetom da zadovoljavaju i prate kriterije opisane u Uputama za autore i ne izlaze iz okvira rada časopisa.

Uredništvo ne preuzima odgovornost za gledišta u radu - to ostaje isključivom odgovornošću autora.

Časopis objavljuje sljedeće vrste članaka: uvodnike, izvorne znanstvene, stručne i pregledne radove, prikaze bolesnika, lijekova i metoda, kratka priopćenja, osvrte, novosti, prikaze knjiga, pisma uredništvu i druge priloge iz područja socijalne psihijatrije i srodnih struka.

Iznimno Uredništvo časopisa može prihvatiti i drugu vrstu rada (prigodni rad, rad iz povijesti struke i sl.), ako ga ocijeni korisnim za čitateljstvo.

Tijekom cijelog redakcijskog postupka, *Socijalna psihijatrija* slijedi sve smjernice Odbora za etiku objavljivanja (*Committee of publication ethics* – COPE), detaljnjije na: https://publicationethics.org/files/Code%20of%20Conduct_2.pdf, kao i preporuke ponašanja, izvještavanja, uređivanja i objavljivanja znanstvenih radova u časopisima medicinske tematike kojeje objavio Međunarodni odbor urednika medicinskih časopisa (*International Committee of Medical Journal Editors* – ICMJE), detaljnjie na: http://www.icmje.org/journals-following-the-icmje-recommendations/.

Urednici časopisa *Socijalna psihijatrija* također su obvezni osigurati integritet i promicati inovativne izvore podataka temeljenih na dokazima, kako bi održali kvalitetu i osigurali utjecaj objavljenih radova u časopisu, a sukladno načelima iznesenim u Sarajevskoj deklaraciji o integritetu i vidljivosti (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5209927/).

Uredništvo

Svaki rad zaprimljen u Uredništvu časopisa *Socijalna psihijatrija* pregledava glavni urednik. Ako rad ne zadovoljava kriterije opisane u Uputama za autore, glavni urednik časopisa rad vraća autoru. Radovi koji zadovoljavaju uvjete bit će upućeni na recenziju.

Recenzija

Radovi koji su pisani prema Uputama za autore, šalju se na recenziju.

Časopis *Socijalna psihijatrija* recenzentima savjetuje da se pridržavaju uputa u Uputama za recenzente koje su dostupne na mrežnim stranicama Časopisa.

Instructions to authors

Aim & Scope

Socijalna psihijatrija is a peer-reviewed journal intended for publication of manuscripts from the fields of social psychiatry, clinical psychiatry and psychology, biopsychology, psychotherapy, forensic psychiatry, war psychiatry, alcoholism and other addictions, mental health protection among persons with intellectual and developing disabilities, epidemiology, deontology and psychiatric service organisations.

All manuscripts must be written in the Croatian and English language.

All manuscripts undergo the same review process if they follow the scope of the Journal and fulfil the conditions according to the Author guidelines.

The Editorial board will not take the responsibility for the viewpoint of the Author's manuscript – it remains the exclusive responsibility of an Author.

Socijalna psihijatrija publishes the following types of articles: editorials, original scientific papers, professional papers, review's, case reports, reports on drugs and methods of treatment, short announcements, annotations, news, book review's, letters to the editor, and other papers in the field of social psychiatry.

Exceptionally, the Editorial board can accept other kinds of paper (social psychiatry event paper, social psychiatry history-related paper, etc.).

During the whole peer-reviewed process, the *Socijalna psihijatrija* journal follows the Committee of publication ethics (COPE) guidelines (https://publicationethics.org/files/Code%20of%20Conduct_2.pdf) as well as the "Recommendations for the conduct, reporting editing, and publication of scholarly work in medical journals" set by the International Committee of Medical Journal Editors (ICMJE - http://www.icmje.org/journals-following-the-icmje-recommendations/).

Editors at the *Socijalna psihijatrija* journal pay close attention to the integrity and visibility of scholarly publications as stated in Sarajevo Declaration (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5209927/).

Editorial board

Each received manuscript is evaluated by the Editor-in-Chief. The manuscripts that do not meet the main criteria listed in the Author guidelines are returned to the Author. Manuscripts that are qualified are processed further.

Peer-review

Manuscripts that meet the scope of the Journal and are prepared according to the Author guidelines are sent to peer-review.

Socijalna psihijatrija advises its reviewers to adhere to the Journal's Guidelines for peer-reviewers available on the Journal webpage.

Etički kodeks

Podrazumijeva se da su svi autori radova suglasni o publikaciji i da nijedan dio rada nije prije publikacije u *Socijalnoj psihijatriji* već bio objavljen u drugom časopisu te da nije u postupku objavljivanja u drugom časopisu.

Uredništvo može objaviti neki već prije tiskani tekst uz dogovor s autorima i izdavačima.

Rad objavljen u *Socijalnoj psihijatriji* smije se objaviti drugdje bez dopuštenja autora, uredništva i izdavača, uz navod da je već objavljen u *Socijalnoj psihijatriji*.

Autorska prava i licence

Nakon što je rad prihvaćen autori moraju jamčiti da su sva autorska prava na rukopis prenesena u časopis *Socijalna psihijatrija*. Izdavač (Medicinska naklada d.o.o.) ima pravo reproducirati i distribuirati članak u tiskanom i elektroničkom obliku bez traženja dopuštenja od autora. Svi objavljeni rukopisi podliježu licenci *Creative Commons Attribution* koja korisnicima omogućuje čitanje, preuzimanje, kopiranje, distribuiranje, ispis, pretraživanje ili povezivanje punih tekstova ovih članaka u bilo kojem mediju ili formatu. Također, korisnici mogu mijenjati tekst pod uvjetom da je originalni rad pravilno naveden i bilo kakva promjena pravilno naznačena. Potpuna zakonska pozadina licence dostupna je na: https://creativecommons.org/licenses/by/4.0/legalcode

Sukob interesa

Časopis *Socijalna psihijatrija* potiče i podržava sve autore i recenzente da prijave potencijalne sukobe interesa kako bi se osigurala transparentnost prigodom pripreme i recenzije radova. Prema ICMJE-u: „Sukob interesa postoji ako autorove (ili institucija u kojoj je autor zaposlen) financijske (zaposlenje, u posjedu dionica, plaćeni honorar), akademske, intelektualne ili osobne veze neprimjereno utječu na njegove odluke" (detaljnije objašnjenje dostupno je na mrežnim stranicama ICMJE-a: http://www.icmje.org/conflicts-of-interest/).

Otvoreni pristup

Časopis *Socijalna psihijatrija* je časopis otvorenog pristupa i njegov je sadržaj dostupan besplatno na mrežnim stranicama časopisa.

Naplata troškova prijevoda radova

Autor snosi dio troškova prijevoda na engleski ili hrvatski jezik, odnosno lektoriranja rada.

Oprema rukopisa

Rad i svi prilozi dostavljaju se isključivo u elektroničkom obliku. Preporučena duljina teksta iznosi do 20 kartica (1 kartica sadrži 1800 znakova s razmacima). Tekstove treba pisati u Wordu, fontom postavljenim za stil Normal, bez isticanja unutar teksta, osim riječi koje trebaju biti u boldu ili italiku. Naslove treba pisati istim fontom kao osnovni tekst (stil Normal), u poseban redak, a hijerarhiju naslova može se označiti brojevima (npr. 1., 1.1., 1.1.1. itd.).

Autoru koji je zadužen za dopisivanje treba navesti titulu, ime i prezime, adresu, grad, državu i adresu e-pošte. Također je potrebno navesti i ORCHID identifikatore svih autora (više na https://orcid.org/register).

Naslovna stranica rada sadrži: naslov i skraćeni naslov rada, puna imena i prezimena svih autora, naziv ustanova u kojima rade. Sažetak treba sadržavati do 200 riječi. U sažetku treba navesti temu i svrhu rada, metodologiju, glavne rezultate i kratak zaključak. Uz sažetak treba navesti 3 do 5 ključnih riječi koje su bitne za brzu identifikacijsku klasifikaciju sadržaja rada.

Znanstveni i stručni radovi sadrže ove dijelove: sažetak, uvod, cilj rada, metode, rezultati, rasprava i zaključci.

Uvod je kratak i jasan prikaz problema; u njemu se kratko spominju radovi onih autora koji su u izravnoj vezi s istraživanjem što ga rad prikazuje.

Ethical code

All the submissions are accepted with the understanding that they have not been and will not be published elsewhere in any substantially format.

The Editorial board, with the agreement of the Author and Publisher, can republish previously published manuscripts.

The manuscript published in *Socijalna psihijatrija* can be published elsewhere without the permission of the Author, Editorial board and Publisher, with the note that it has already been published in *Socijalna psihijatrija*.

Copyright and publication licence

After a manuscript is accepted for publication, the Authors must guarantee that all copyrights of the manuscript are transferred to *Socijalna psihijatrija*. The publisher (Medicinska naklada d.o.o.) has the right to reproduce and distribute manuscripts in printed and electronic form without asking permission from Authors. All manuscripts published on line are subject to the Creative Commons Attribution License which permits users to read, download, copy, distribute, print, search, or link to the full texts of these articles in any medium or format. Furthermore, users can remix, transform, and build upon the material, provided the original work is properly cited and any changes properly indicated. The complete legal background of the license is available at: https://creativecommons.org/licenses/by/4.0/legalcode.

Conflict of interest

Socijalna psihijatrija encourages all Authors and Reviewers to report any potential conflicts of interest to ensure complete transparency regarding the preparation and reviewing of the manuscript. According to the International Committee of Medical Journal Editors (ICMJE): "Conflict of interest exists when an author (or the author's institution) has financial (employment, consultancies, stock ownership, honoraria and paid expert testimony) or personal relationship, academic competition or intellectual passion that inappropriately influences his actions." (available at: http://www.icmje.org/conflicts-of-interest/).

Open-access

Socijalna psihijatrija is an open-access journal, and all its content is free and available at the Journal's webpage.

Article processing charges

The translation or language editing of the manuscript from Croatian to English (and *vice versa*) is funded by authors.

Manuscript preparation

Manuscripts, figures and tables should be submitted in electronic form. Normally, manuscripts should be no longer than 20 standard pages (one standard page is 1800 keystrokes – characters with spaces). Texts should be written in Microsoft Word, in a continuous font and style: the one set under the Normal style, with no additional font effects used other than words that should be in bold or italic. Tittles should be written in the same font as the rest of the text (Normal style) in a separate row, and title hierarchy should be shown using numbers (e.g. 1., 1.1., 1.1.1., etc.).

There should be a title, name and surname, address, town, state and e-mail indicated for the corresponding author.

The title page should contain: the full and shortened title of the article, full names and full surnames of all authors of the article, and the institution they work for. All the authors should also provide an ORCHID ID (please check the following website: https://orcid.org/register). The article should have a summary not exceeding 200 words. The summary should briefly describe the topic and aim, the methods, main results, *Cilj* je kratak opis što se namjerava istraživati, tj. što je svrha istraživanja.

Metode se prikazuju tako da se čitatelju omogući ponavljanje opisanog istraživanja. Metode poznate iz literature ne opisuju se, već se navode izvorni literaturni podatci. Ako se navode lijekovi, rabe se njihova generička imena (u zagradi se može navesti njihovo tvorničko ime).

Rasprava sadrži tumačenje dobivenih rezultata i njihovu usporedbu s rezultatima drugih istraživača i postojećim spoznajama na tom području.U raspravi treba objasniti važnost dobivenih rezultata i njihova ograničenja, uključujući i implikacije vezane uz buduća istraživanja, ali uz izbjegavanje izjava i zaključaka koji nisu potpuno potvrđeni dobivenim rezultatima.

Zaključci trebaju odgovarati postavljenom cilju istraživanja i temeljiti se na vlastitim rezultatima.

Tablice treba smjestiti unutar Word-dokumenta na kraju teksta, a označiti mjesto njihovog pojavljivanja u tekstu. Ako se tablica daje u formatu slike (tj. nije izrađena u Wordu), za nju vrijede upute kao za slike. Svaka tablica treba imati redni broj i naslov.

Slike treba priložiti kao posebni dokument u .tiff ili .jpg (.jpeg) formatu, minimalne rezolucije 300 dpi. Uz redni broj svaka slika treba imati legendu. Reprodukciju slika i tablica iz drugih izvora treba popratiti dopuštenjem njihova autora i izdavača.

Rad može sadržavati i zahvalu na kraju teksta.

U tekstu se literaturni podatak navodi arapskim brojem u zagradi.

Literatura

Časopis *Socijalna psihijatrija* usvojila je Vancouverski stil citiranja literature, prema standardima ICMJE koji preporučuju citiranje djela objavljena u cijelosti, odnosno ona koja su javno dostupna, što ujedno znači da treba izbjegavati navođenje sažetaka, usmenih priopćenja i sl.

Ponovno citiranje nekog rada treba označiti istim brojem pod kojim je prvi put spomenut.

Prigodom doslovnog navođenja izvatka iz drugog teksta koriste se navodnici. Ovaj način citiranja treba koristiti samo u slučajevima kada se informacija ne može kvalitetno preformulirati ili sažeti (npr. kod navođenja definicija).

Sekundarno citiranje odnosi se na slučaj kada autor koristi navod iz djela kojemu nema pristup, već je do navoda došao posredstvom drugog rada u kojem je izvorni rad citiran. Ovaj način citiranja treba izbjegavati gdje god je to moguće, odnosno uvijek treba pokušati pronaći izvorno djelo. Ako to nije moguće, u popisu literature se navodi rad koji je zaista korišten, a ne rad u kojem je informacija primarno objavljena.

1. Autori

Ako djelo ima šest autora, navode se svi autori. Ako djelo ima više od šest autora, navodi ih se prvih šest, a ostali se označavaju kraticom *et al.* ili *i sur.* Prvo se navodi prezime, a potom inicijali imena. Više inicijala imena iste osobe piše se bez razmaka.

2. Naslov i podnaslov rada

Prepisuju se iz izvornika i međusobno odvajaju dvotočkom. Samo prva riječ naslova i vlastita imena (osobna, zemljopisna i dr.) pišu se velikim početnim slovom.

3. Naslov časopisa

Naslovi časopisa skraćuju se sukladno sustavu koji koristi MEDLINE (popis kratica dostupan je na adresi: http://www.ncbi.nlm.nih.gov/nlmcatalog/journals). Naslov časopisa se ne skraćuje ako se on ne nalazi na prethodno navedenom popisu kratica.

4. Numerički podatci o časopisu

Arapskim brojkama upisuju se podatci koje se može pronaći u samom izvorniku ili u nekoj bibliografskoj bazi podataka i to sljedećim redom: godina, volumen ili svezak, sveščić ili broj (engleski *issue* ili *number* – no.), dio (engleski *part*), dodatak (engleski *supplement* ili *suppl.*),

and conclusion. The summary should be followed by 3 to 5 key words for easy identification and classification of the content of the article.

Original scientific and professional papers should be arranged into sections as follows: summary, introduction, aim, methods, results, discussion and conclusion.

The Introduction section is a short and clear overview; it briefly mention Authors involved with the research of the paper.

The Aim section briefly describes the goals and intentions of the research, i.e. the point of the research.

The Methods section should be presented in such way as to allow the reader to replicate them without further explanation. Methods known from the literature need not be described but should simply be referred to by their generic names (trade names should be given in parentheses).

The Discussion section includes the results and their comparison with the results of other researchers and well known scientific knowledge in that area. It should also explain the significance of the results and their limitations, including implications regarding future studies, statements and conclusions that are not verified by the results should be avoided.

The Conclusions section should correspond to the aim of the study and be based on its results.

Tables should be placed at the end of the text in the Word document and with an indication where they are to appear in the published article. If the table is submitted as an image (i.e. is not constructed in Microsoft Word), the same instructions as for images apply.

Images should be submitted separately in .tiff or .jpg (.jpeg) format, with a minimum resolution of 300 dpi. Every image should have a number and caption. Reproduction of images and tables from other sources should be accompanied by a full reference and authorization by their Authors and Publisher.

The manuscript may have an acknowledgement at the end of the text.

References should be written with Arabic numerals in parentheses.

References

Socijalna psihijatrija applies the Vancouver referencing style according to the International Committee (ICMJE) standards. ICMJE recommends citation of the complete manuscripts, i.e. publicly accessible manuscripts, meaning that summaries, announces, etc. should be avoid.

Repeated citing of a manuscript should be marked by the same number as when it is mentioned for the first time.

Quotation marks should be used when citing another text. This mode of citation should only be used when the information cannot be properly reformulated or summarized (e.g. when referring to a definition).

Secondary citations refer to cases when Authors quote a passage from an inaccessible work to using a different text than the one where the quote originated. This kind of quotation should be avoided as much as possible i.e. always try to find the original scientific manuscript. In cases when it is not possible, the manuscript should cite the work that was used and not the work in which the information was primarily published.

1. Authors

In case the manuscript has six or fewer Authors, all of them should be listed. Should the manuscript have more than six Authors, the first six should be listed and the rest of them marked with the abbreviation *et al.* or i sur. First list the surname and then the initials of the first name(s). Multiple initials for the same person should be written without spaces.

2. Title and subtitle

Titles and subtitles are copied from the original and separated by a colon. Only the first word of the title and name are written in capital letters.

3. Journal title

Journal titles are shortened according to the MEDLINE system (a list of abbreviations is available at: http://www.ncbi.nlm.nih.gov/nlmcatalog/journals). The title of the journal is not shortened if fit is not found in the abovementioned shortcut list.

stranice (engleski *pages*). Broj sveščića upisuje se u okruglu zagradu, a obvezno ga je upisati ako paginacija (numeracija) svakog sveščića počinje od 1. Ako ne možete prepoznati broj/sveščić časopisa (primjerice, kad su sveščići uvezani), taj se podatak može izostaviti. Stranice rada se upisuju od prve do zadnje.

Primjer:

Kingdon DG, Aschroft K, Bhandari B, Gleeson S, Warikoo N, Symons M et al. Schizophrenia and borderline personality disorder: similarities and differences in the experience of auditory hallucinations, paranoia and childhood trauma. J Nerv Ment Dis 2010; 10(6): 399-403.

5. Izdanje knjige

Navodi se rednim brojem i kraticom izd. Rednom broju sveska knjige (ako je djelo u više svezaka) prethodi oznaka sv.

6. Grad izdanja

Upisuje se prvi grad naveden u izvorniku, za sve ostale se dodaje itd. (engleski *etc.*).

7. Izdavač

Prepisuje se iz izvornika.

8. Godina izdanja

Prepisuje se s naslovne stranice, a ako nije navedena godina izdanja, bilježi se godina copyright-a © koja se često nalazi na poleđini naslovne stranice.

Primjer:

Kring AM, Johnson SL, Davison GC, Neale JM. Abnormal Psychology. New York: Wiley, 2013.

9. Poglavlje u knjizi

Opisuje se prvo autorima i naslovom poglavlja, nakon čega slijede podatci o knjizi. Ispred navođenja urednika knjige stavlja se riječ u: (engleski *in:*), a iza u okrugloj zagradi ur. (engleski *ed.*)

Primjer:

Millon T. Brief History of Psychopathology. In: Blaney PH, Millon T (eds.) Oxford Textbook of Psychopathology. New York: Oxford University Press, 2009.

10. Stranica knjige

Navode se samo ako se citira dio knjige, uz oznaku str. (engleski *pages*).

Primjer:

Mimica N. Delirij. U: Begić D, Jukić V, Medved V. (ur.). Psihijatrija. Zagreb: Medicinska naklada, 2015, str. 84-86.

11. URL/Web adresa

Obavezno se navodi za mrežne izvore.

12. Datum korištenja/pristupa

Obavezno se navodi za mrežne izvore.

13. DOI

Ako postoji, obavezno se navodi za mrežne izvore.

Primjer:

Cook A, Spinazzola J, Ford J, Lanktree C, Blaustein M, Cloitre M, DeRosa R, Hubbard R, Kagen R, Liautaud J, Mallah K, Olafson E,van der Kolk B. Complex trauma in children and adolescents. Psych Ann 2005; 35(5): 390-398. Preuzeto 14. listopada 2017. shttps://doi.org/10.3928/00485713-20050501-05.

4. Numerical journal data

The data that can be found in the original or in any of the bibliographic database should be written in Arabic numerals, in the following order: year, volume, issue, part, supplement, pages. Issue number is entered in parentheses and it is required to enter it starting from 1. In case the issue of the Journal cannot be recognized (e.g. when the issues are bonded), that data may be omitted. The page numbers are written from first to last.

E. g.

Kingdon DG, Aschroft K, Bhandari B, Gleeson S,Warikoo N, Symons Metal. Schizophrenia and borderline personality disorder: similarities and differences in the experience of auditory hallucinations, paranoia and childhood trauma. J Nerv Ment Dis 2010; 10(6): 399-403.

5. Book issue

Book issue is indicated by the ordinary number and the abbreviation “Ed”. In case the book has more than one volume, use the abbreviation “Vol”.

6. City of issue

Insert only the first city from the original work. For every additional city, use the abbreviation etc.

7. Publisher

Copy from the original.

8. Year of issue

Copy it from the main page. In case the year is not indicated, the copyright year should be written (it can be found at the end of the book).

E.g.

Kring AM, Johnson SL, Davison GC, Neale JM. Abnormal Psychology. New York: Wiley, 2013.

9. Book chapter

Book chapter should list the authors and title followed by book data. Use the abbreviation “In” before the Editor’s name:

E. g.

Millon T. Brief History of Psychopathology. In: Blaney PH, Millon T (eds.) Oxford Textbook of Psychopathology. New York: Oxford University Press, 2009.

10. Book page

Book pages are marked with “pages” only if a part of the book is being quoted:

E. g.

Mimica N. Delirij. U: Begić D, Jukić V, Medved V. (ur.). Psihijatrija. Zagreb: Medicinska naklada, 2015, pages: 84-86.

11. Web address

Required for online resources.

12. Date of use

Required for online resources.

13. DOI

If available, it is mandatory to cite online resources.

E. g.

Cook A, Spinazzola J, Ford J, Lanktree C, Blaustein M, Cloitre M, et al. Complex trauma in children and adolescents. Psych Ann 2005; 35(5): 390-398. Accesed 14. October 2017. https://doi.org/10.3928/00485713-20050501-05.