
zdravje starostnikov
health of the elderly



Univerza na Primorskem • Fakulteta za vede o zdravju
Università del Litorale • Facoltà di scienze della salute
University of Primorska • Faculty of health sciences

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Zdravje starostnikov Health of the Elderly

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z mednarodno udeležbo
5th scientific and professional
international conference*

*Zbornik povzetkov z recenzijo
Book of Abstracts*



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THANKS TO OUR CONFERENCE SPONSORS

Uvodne misli

Preface

Zdravje starostnikov

Skrb za starostnike odseva zrelost družbe

Svetovna populacija starostnikov strmo narašča. Da bi izboljšali dobro počutje in kakovost življenja omenjene populacije, se številne raziskave in pobude na tem področju osredotočajo na fizično in duševno zdravje starostnikov in nenazadnje tudi na izboljšanje njihovega socialnega življenja. Hkrati pa raziskovalci in javni organi namenjajo posebno pozornost identifikaciji še posebej ranljivih posameznikov v populaciji starostnikov. Osebe, ki sodijo v omenjeno skupino, so ogrožene zaradi slabega zdravja. Njihovo rizično stanje predstavlja prikrito nevarnost za njihovo življenje, pa tudi za blaginjo celotne družbe.

S predstavitvijo najnovejših znanstvenih in strokovnih prispevkov na tem področju v pričujoči publikaciji želimo povečati ozaveščenost na področju zdravja in dobrega počutja starostnikov. Namenjena je raziskovalcem, visokošolskim učiteljem, študentom, raznim strokovnjakom na področju zdravstva in tistim, ki se zanimajo za dobro počutje starejših ljudi. Rdeča nit publikacije je predstavitev različnih pristopov s ciljem izboljšanja zdravja in življenja starostnikov.

Avtorji prispevkov predstavljajo aktualne študije in inovativne praktične pristope s poudarkom na: (1) psihosocialnih vidikih prilagajanja na staranje in kako se slednje lahko vpelje v prakso; (2) identifikaciji raznih problemov na področju prehrane starostnikov in prikazu možnih rešitev; (3) predstavitvi dobrih praks in rešitev na področju uporabe informacijsko-komunikacijskih tehnologij za aktivacijo omenjene populacije v vsakodnevnih aktivnostih in v komuniciranju z izvajalci zdravstvenih storitev; (4) vplivu kakovosti grajenega okolja na pojavnost težav, povezanih s staranjem; in nenazadnje (5) vplivom različnih programov z gibalno oz. športno vsebino, ki spodbujajo moč, ravnovesje in splošno zmogljivost starostnikov.

Upamo, da bosta tako konferenca kot pričujoča publikacija zadovoljili vaša pričakovanja. Prav tako vas vljudno vabimo na konferenco Fakultete za zdravstvene vede v letu 2019, katere osrednja tema bo zdravje otrok in mladostnikov.

Uredniški odbor

Health of the Elderly

Care for the elderly reflects the maturity of the society

The world's population of elderly people is growing at an unprecedented rate. In order to improve the well-being and quality of life of the aforementioned population, several studies and initiatives focus on its physical and mental health as well as on the enhancement of its social life. At the same time, researchers and public authorities pay special attention to the identification of particularly vulnerable older adults who are at risk from poor health. Their condition is a latent danger for their life as well as well-being of the entire society.

This publication aims to raise the awareness about the health of the elderly and well-being by presenting to the public the recent scientific and expert contributions to this field. It is intended for researchers, university lecturers, students, various experts in the field of health care as well as those who are interested in the well-being of the elderly. "Le Fil Rouge" of the publication is the presentation of various approaches to improve health and quality of life for the elderly.

Authors of the contributions present the current studies and innovative practical approaches by focusing on: (1) the psychosocial aspects of adjustment to aging and how they could be implemented in practice; (2) the identification of various nutrition problems in this population and presentation of potential solutions; (3) the best practices and future solutions in the use of information and communication technologies for the activation in everyday activities and interaction with health services; (4) the impact of the quality of built environment on the occurrence of a variety of aging problems; and last, but not least, (5) the effects of different physical activity programmes promoting strength, balance, and overall fitness of the elderly.

We hope that the conference as well as the current publication will satisfy your expectations. You are kindly invited to the 2019 Faculty of Health Sciences Conference dedicated to child and adolescent health.

The Editorial Board

Program konference **Conference Programme**

7.30–8.30	Registracija udeležencev Registration <i>Avla dvorane Galea</i> <i>Galea's Foyer</i>	Namestitev posterjev Poster posting
8.30–9.45	Otvoritev in plenarna predavanja, I. del Opening and plenary lectures Ist part <i>Dvorana Galea, pritličje</i> <i>Galea Hall, Groundfloor</i>	
9.45–10.10	Odmor s kavo Coffee break <i>Avla dvorane Galea</i> <i>Galea's Foyer</i>	Namestitev posterjev Poster posting
10.10–12.30	Sekcije, I. del Sections Ist part	
10.10–11.25	SLO Sekcija STAROSTNIK – OKOLJE Section ELDERLY – ENVIRONMENT <i>Dvorana Galea</i> <i>Galea Hall</i>	ANG Sekcija TELESNA (NE)AKTIVNOST IN NJEN POMEN ZA ZDRAVJE STAROSTNIKOV Section PHYSICAL (IN)ACTIVITY AND ITS IMPORTANCE FOR HEALTHY AGEING <i>Dvorana Batana</i> <i>Batana Hall</i>
11.25–12.30	SLO Sekcija PROBLEMI IN IZZIVI V PREHRANI STAROSTNIKOV Section NUTRITION PROBLEMS AND CHALLENGES IN THE EL- DERLY <i>Dvorana Galea</i> <i>Galea Hall</i>	ANG Sekcija STAROSTNIKOM PRILAGOJENE IKT REŠITVE IN STORITVE Section ICT SOLUTIONS AND SERVICES TAILORED FOR THE ELDERLY <i>Dvorana Batana</i> <i>Batana Hall</i>
12.30–13.30	Odmor s kosilom Lunch <i>Restavracija GH Portorož</i> <i>Restaurant of GH Portorož</i>	

13.30–15.00 Plenarna predavanja, 2. del
Plenary lectures 2nd part

Dvorana Galea, pritličje
Galea Hall, Groundfloor

15.00–15.30 Odmor s predstavitvijo posterjev
Coffee break with Poster presentations

Avla dvorane Galea
Galea's Foyer

15.30–17.50 Sekcije, 2. del
Sections 2nd part

15.30–16.40	SLO	ANG
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	<i>Dvorana Galea</i> <i>Galea Hall</i>	<i>Dvorana Batana</i> <i>Batana Hall</i>
16.40–17.50	SLO	ANG
	Sekcija TELESNA (NE)AKTIVNOST IN NJEN POMEN ZA ZDRAVJE STAROSTNIKOV Section PHYSICAL (IN)ACTIVITY AND ITS IMPORTANCE FOR HEALTHY AGEING	Sekcija PSIHOSOCIALNI VIDIKI PRILAGAJANJA NA STARANJE Section PSYCHOSOCIAL ASPECTS OF ADJUSTMENT TO AGING
	<i>Dvorana Galea</i> <i>Galea Hall</i>	<i>Dvorana Batana</i> <i>Batana Hall</i>

**17.50 Zaključek konference s podelitvijo študentskih nagrad
za najboljši prispevek**
**End of the Conference with Student Abstract Award
Announcement**

Dvorana Galea, pritličje
Galea Hall, Groundfloor

PLENARNA PREDAVANJA, I. DEL PLENARY LECTURES 1st PART (8:45–9:45)

O mišični atrofiji in sarkopeniji: mehanizmi in posledice
Insights into muscle atrophy and sarcopenia:
mechanisms and countermeasures
Antonio Musaró 32/33

Specifični vidiki prehranske obravnave pri starostniku
Specific aspects of nutritional treatment of very old patients
Luboš Sobotka 36/37

PLENARNA PREDAVANJA, 2. DEL PLENARY LECTURES 2nd PART (13:30–15:00)

Spremembe v nadzoru stabilnosti gibanja pri starostnikih
in različnih s starostjo povezanih motnjah
Changes in the control of movement stability with age and age-related
disorders
Mark L. Latash 30/31

Staranje, mobilnost in tveganje za padce: merjenje v laboratorijskem okolju
in vsakdanjem življenju
Ageing, mobility and fall risk: measurements in the lab and in daily life
Mirjam Pijnappels 34/35

Dobra spolnost v starosti? Blagostanje na področju spolnosti v starosti
Are Older Adults Well Sexually? Sexual Well-Being in Old Age
Sofia von Humboldt 38/39

PRISPEVKI V OKVIRU SEKCIJ (po vrstnem redu kot sledijo predstavitve) CONTRIBUTIONS

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Sekcija STAROSTNIK – OKOLJE
Section ELDERLY – ENVIRONMENT (10:10–11:25)

I.1 Prilagoditev v bivalnem okolju starejšim (VABLJENO PREDAVANJE)
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Jasna Hrovatin, David Ravnik 94/95

- I.2 Oskrba kronične rane pri starostniku v domačem okolju
The treatment of chronic wound among elderly at home
Zvonka Fekonja, Sergej Kmetec, Dubravka Sancin, Tadeja Zrim 96/97
- I.3 Kakovost spanja pri starejši populaciji: sistematični pregled literature
Quality of sleep among elderly: a systematic review
Sergej Kmetec, Zvonka Fekonja, Mateja Lorber 98/99
- I.4 Nasilje nad starostniki
The abuse of elderly people
Ines Osvald, Anita Štrancar, Bor Zavrl, Andrej Starc 100/101
- I.5 Okolje in starostnik z gluhosto in naglušnostjo
Environment and the elderly with deafness and hand of hearing
Cvetka Pangerl 102/103
- I.6 Biomehanska in ergonomska analiza pomoči pacientu pri vstajanju
Biomechanical and ergonomical analysis of assisting patients in standing up
David Ravnik, Václav Bittner 104/105
- I.7 Strategije za uspešno življenje v domačem okolju pri starejših invalidih
Strategies for successful life in the home environment for older disabled people
Mitja Slapar, Anton Zupan 106/107

Sekcija PROBLEMI IN IZZIVI V PREHRANI STAROSTNIKOV
Section NUTRITION PROBLEMS AND CHALLENGES IN THE ELDERLY
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- I.1 Pomen beljakovin v prehrani starostnika
The importance of protein intake in older adults
Marjana Benigar Manias, Mojca Stubelj 44/45
- I.2 Motnje prehranjevanja v starejšem življenjskem obdobju
Nutrition disorders in the elderly living period
Monika Brglez, Tamara Poklar Vatovec, Nadja Plazar 48/49
- I.3 Vpliv uživanja različnih vrst kruha na krvni sladkor in občutek sitosti
Influence of consuming different sorts of bread on blood sugar and satiety
Tamara Kofol, Boris Kovač 52/53
- I.4 Prehranska obravnava starostnikov v domovih za starejše
Nutritional Treatment of Elderly in Nursing Homes
Urša Mršnik, Eva Žaberl, Miha Kranjc 56/57

- I.5 Prehranjenost starostnikov ob sprejemu na kirurški oddelek
Nutritional status of older adults admitted to the Surgical Ward
Nika Slokar, Nina Mohorko 60/61
- I.6 Izzivi za dietetika v prehranski obravnavi starostnika
Challenges for dietitians in nutritional support of elderly
Mila Terčelj, Denis Mlakar Mastnak 64/65

Sekcije, I. del – ANG, dvorana Batana
Sections Ist part – ENG, Batana Hall (10:10–12:30)

Sekcija TELESNA (NE)AKTIVNOST IN NJEN POMEN
ZA ZDRAVJE STAROSTNIKOV
Section PHYSICAL (IN)ACTIVITY AND ITS IMPORTANCE
FOR HEALTHY AGEING
(10:10–11:25)

- I.1 (Ne)odvisnost jakosti in posturalne stabilnosti pri starostnikih
(VABLJENO PREDAVANJE)
(In)dependence of Strength and Postural Stability in Elderly
(INVITED LECTURE)
Nejc Šarabon 120-121
- I.2 Promocija aktivnosti starejših z namenom podaljševanja samostojnega bivanja – program aktivnega staranja Soseska za samostojno življenje
Delaying admission to residential care through keeping elderly residents active for longer- providing active ageing through a Retirement Village
Charmaine Attard, Maria Cassar 122/123
- I.3 Vloga telesne aktivnosti in prehrane pri preprečevanju krhkosti
Role of physical activity and nutrition in prevention of frailty
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- I.4 Vpliv telesne neaktivnosti na vnetne dejavnike
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- I.5 Vpliv sedečega delovnika na funkcije trupa – kontekst starejših zaposlenih
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- I.6 Presejanje za funkcijsko manjzmožnost v okviru Programa za krepitev zdravja motivira starejše k aktivnemu življenju
Functional disability screening within Health promotion program motivates elderly for active life
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- I.7 Pozitivni učinki plesa na kognitivno funkcijo pri starejših
Benefits of dancing on cognitive functioning in old age
Mandy Knoll 132/133
- I.8 Ali se čas sedentarnosti na delovnem mestu s starostjo povečuje?
Is workplace sedentary behavior increasing with age?
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Sekcija STAROSTNIKOM PRILAGOJENE IKT REŠITVE IN STORITVE
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- I.1 Kako narediti telemedicinske storitve dostopne kroničnim bolnikom v podporo samozdravljenju v domačem okolju?
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(INVITED LECTURE)
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- I.2 Priporočila za aplikacijske piktograme za starostnike
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- I.3 Prednosti in slabosti telemedicine pri oskrbi v domačem okolju
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- I.4 Naslavljanje starostne krhkosti s pomočjo informacijsko-komunikacijske tehnologije
Tackling frailty with the help of Information Communication Technology
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Sekcije, 2. del – SLO, dvorana Galea
Sections, 2nd part – SLO, Galea Hall (15:30–17:50)

Sekcija PSIHOSOCIALNI VIDIKI PRILAGAJANJA NA STARANJE
Section PSYCHOSOCIAL ASPECTS OF ADJUSTMENT TO AGING
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- I.1 Samospoštovanje in kakovost življenja stanovalcev v domu za starejše in lastnem domu
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(INVITED LECTURE)
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- I.2 Vpliv telesne dejavnosti na kognitivne sposobnosti starejših ljudi
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- I.4 Psihomotorna upočasnjenost pri bolnikih s starostno depresijo
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- I.6 Stališča študentov zdravstvene nege do spolnosti v tretjem življenjskem obdobju
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- I.7 Medgeneracijski programi kot rešitev socialne izoliranosti starostnikov
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Sekcija TELESNA (NE)AKTIVNOST IN NJEN POMEN
ZA ZDRAVJE STAROSTNIKOV
Section PHYSICAL (IN)ACTIVITY AND ITS IMPORTANCE
FOR HEALTHY AGEING
(16:40 – 17:50)

- I.1 Vloga telesne aktivnosti in prehrane pri preprečevanja krhkosti
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- I.2 Vpliv vadbe za razvoj vzdržljivosti in umovadbe na delovni spomin
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- I.4 Telesna aktivnost in njen pomen za zdravje starostnikov
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Sekcije, 2. del – ANG, dvorana Batana
Sections 2nd part – ENG, Batana Hall (15:30–17:50)

Sekcija PROBLEMI IN IZZIVI V PREHRANI STAROSTNIKOV
Section NUTRITION PROBLEMS AND CHALLENGES IN THE ELDERLY
(15:30–16:40)

- I.1 Izzivi dolgožive družbe in prehrana starostnika
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- I.2 Mikrobiološka obremenitev v proizvodnji medicinskih pripomočkov
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- I.6 Do boljšega kognitivnega zdravja s prehrano
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Sekcija PSIHOSOCIALNI VIDIKI PRILAGAJANJA NA STARANJE
Section PSYCHOSOCIAL ASPECTS OF ADJUSTMENT TO AGING
(16:40–17:50)

- I.1 Kaj napoveduje prilagajanje na staranje med lezbičnimi, gejevskimi
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Nataša Demšar Pečak 72/73
- I.3 Pozitivno staranje: problem mladih generacij ali izziv sodobne družbe
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- I.4 Kulturna participacija in zdravje slovenske mladine, odraslih in starostnikov
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- I.1 Kulturni vidiki doživljanja menopavze pri ženskah na Cerknškem
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- I.2 Ples in vadba kot terapija za bolnika s Parkinsonovo boleznijo – študija primera
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- I.3 Dejavniki tveganja za razvoj bolezni možganskega žilja pri starejših osebah po kapi
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- I.4 Zaupanje/nezaupanje starostnikov v zdravstvene delavce
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- I.5 Ali sta skupini mlajših starejših in zelo starih različni?
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- I.6 Psihološki izzivi terapije s starejšimi osebami
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- I.7 Povezljivi gospodinjski aparati za večjo varnost in samostojnost starostnikov
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- I.8 Učinki redne vadbe pri starejših
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- I.9 Preprečevanje neenakosti v zdravju starejših z zagotavljanjem transkulturne zdravstvene nege
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- I.10 Jezikovni most v turizmu za osebe s posebnimi potrebami in starejše
Building a Bridge Language for Disabled and Elderly Care Tourism
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**Vabljeni
predavatelji
Invited lecturers**



Mark Latash je priznani profesor na univerzi Pennsylvania State University. Njegovo raziskovalno delo je osredotočeno na nadzor in usklajevanje gibanja človeka in motenj gibanja. Napisal je pet knjig, med njimi: "Neurofiziološke osnove gibanja" ("The Neurophysiological Basis of Movement") (1998, 2008), "Sinergije" ("Synergy") (2008) in "Osnove motoričnega nadzora" ("Fundamentals of Motor Control") (2012) ter okoli 400 člankov v znanstvenih revijah. Mark Latash je bil ustanovitelj uredništva revije Motor Control (1996-2007) in prvi predsednik Mednarodnega združenja za motorični nadzor (International Society of Motor Control) (2001-2005). Je prejemnik Bernsteinove nagrade na področju motoričnega nadzora.

Mark Latash is a Distinguished Professor at Pennsylvania State University. His research is focused on the control and coordination of human movements and movement disorders. He wrote five books, including "The Neurophysiological Basis of Movement" (1998, 2008), "Synergy" (2008), and "Fundamentals of Motor Control" (2012), as well as about 400 papers in refereed journals. Mark Latash was the Founding Editor of the journal "Motor Control" (1996-2007) and the first President of the International Society of Motor Control (2001-2005). He is a recipient of the Bernstein Prize in motor control.



Antonio Musarò je redni profesor za histologijo, embriologijo in biotehnologijo na Univerzi Sapienza v Rimu. Je član uredništva World Journal of Biological Chemistry, Skeletal Muscle, PlosOne, Current Genomics. Nekdanji predsednik Med-univerzitetnega inštituta za miologijo (IIM). Je tudi član upravnega odbora medicinske akademije v Rimu. Njegovi poglobljeni raziskovalni interesi so: staranje in živčnomišične bolezni (ALS, mišične distrofije); vloga IGF-I v fiziopatologiji skeletnih mišic; celična proliferacija in celična diferenciacija; vloga matičnih celic in tkivne niše pri regeneraciji mišic.

Antonio Musarò is a Full Professor of Histology, Embryology and Biotechnology at Sapienza University Rome. He is a member of the editorial board of the World Journal of Biological Chemistry, Skeletal Muscle, PlosOne, and Current Genomics. Prof. Musarò is a former president of the Interuniversity Institute of Myology (IIM), and a board member of the medical academy of Rome. Major Research Interests: Ageing and neuromuscular diseases (ALS, muscular dystrophies); role of IGF-I in the physiopathology of skeletal muscle; cell proliferation and cell differentiation; role of stem cells and tissue niche on muscle regeneration.



Mirjam Pijnappels je profesorica na področju mobilnosti starejših, na oddelku za znanost o človeškem gibanju na Univerzi Vrije v Amsterdamu. Njeno raziskovalno delo je usmerjeno v razumevanje učinkov staranja na živčnomišične in kognitivne vidike mobilnosti ali z drugimi besedami, na fizično funkcijo in fizično aktivnost. Poleg svojega znanja vključuje uporabo podpornih tehnologij z namenom ohranjanje in spodbujanje mobilnosti starejših posameznikov v njihovem lastnem okolju.

Mirjam Pijnappels is professor in Mobility in Ageing in the department of Human Movement Sciences at Vrije Universiteit Amsterdam. Her research is aimed to understand the effects of ageing on neuromuscular and cognitive aspects of mobility (i.e., physical function and physical activity) and to implement this knowledge with assistive technology to maintain and promote mobility of older individuals in their own environment.



Luboš Sobotka je profesor medicine na Oddelku medicine, presnovnih bolezní in gerontologije na Medicinski fakulteti Univerze Charles Hradec Králové, Republika Češka. Je specialist interne medicine, presnovnih bolezní in prehrane ter gerontologije. Med leti 2002 –2016 je bil predsednik Češkega združenja za klinično prehrano in intenzivno terapijo presnovnih bolezní, od leta 2004 do 2006 pa tudi predsednik komisije za izobraževanje in klinično usposabljanje Evropskega združenja za klinično prehrano in metabolizem ECPC ESPEN. Je avtor 223 objav ter 390 predavanj ter glavni urednik mednarodne Modre knjige - Basic in Clinical Nutrition – 1. izdaje 1999, 2. izdaje 2000, 3. izdaje 2004 in 4. izdaje 2011, ki je bila prevedena v devet jezikov. Od leta 2009 sodeluje v uredniškem odboru revije Nutrition – mednarodna revija uporabnih in temeljnih prehranskih znanosti.

Luboš Sobotka is Professor of Medicine at Department of medicine - Metabolic Care and Gerontology, Faculty of Medicine Charles University Hradec Králové, Czech Republic. He is a specialist in Internal medicine, Metabolic care & nutrition and Gerontology. Between 2002 –2016 he was a chairman of Czech Society of Clinical Nutrition and Intensive Metabolic Care, between 2004 – 2006 he was a chairman of Education and Clinical Practice Committee of European Society of Clinical Nutrition and Metabolism ECPC ESPEN. He is the author of 223 publications and 390 lectures and editor-in-chief of the international Blue Book - Basic in Clinical Nutrition – 1st edition 1999, 2nd edition 2000, 3rd edition 2004. 4th edition 2011, translated to nine languages. Since 2009, he has been a member of the editorial board of the Nutrition magazine - the International Journal of Applied and Basic Nutritional Sciences.



Sofia von Humboldt je klinični in zdravstveni psiholog z dolgoletnimi izkušnjami pri obravnavi starejših odraslih. Trenutno raziskuje na področju spolnosti, staranja, dobrega počutja, duševnega zdravja in medkulturnosti starejše populacije. Dr. von Humboldt je izredna profesorica in vodilna raziskovalka inštituta ISPA-Instituto Universitário v okviru raziskovalnega centra William James, Lizbona. S svojega raziskovalnega področja je objavila številne prispevke, poglavja in knjige o večdimenzionalnem in medkulturnem pristopu k zdravi spolnosti in ohranjanju duševnega zdravja v starosti.

Sofia von Humboldt is a clinical and health psychologist with a long-standing experience with older adults. Her current research interests include sexual well-being, adjustment to ageing, well-being, mental health, and cross-cultural studies with older populations. Dr. von Humboldt is Associate Professor and Principal Investigator in the William James Center for Research at ISPA-Instituto Universitário. Deeply committed to working with older adults, she has written papers, chapters and books on the multidimensional and cross-cultural approach to sexual well-being and health and mental in old age.

**Plenarna
predavanja
Plenary lectures**

Spremembe v nadzoru stabilnosti gibanja pri starostnikih in različnih s starostjo povezanih motnjah

Mark L. Latash

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Uvod: Stabilnost pri vsakodnevnih gibih je, z ozirom na nepredvidljive zunanje motnje in vedno spreminjajoče sile znotraj telesa, ključnega pomena. Ta prispevek bo zajemal pregled najnovejših dognanj iz študij, ki so preiskovale spremembe v stabilnosti gibanja s staranjem ter v povezavi z nekaterimi povezanimi motnjami, kot sta Parkinsonova bolezen (PB) in možganska kap.

Metode: Študije so uporabljale okvir hipoteze nenadzorovane mnogoterosti z namenom kvantifikacije sinergij med opravljanjem stacionarnih motoričnih nalog. Kvantifikacija je vključevala strukturo variance, motorično enovitost in spreminjanje sinergij v času priprave na hitre akcije (t.j. anticipatorne posturalne prilagoditve, APA). Gibalne naloge so bile naloge roke z vključenostjo več prstov ter kompleksne več-mišične posturalne naloge.

Rezultati: Zdravo staranje je povezano z upadom tako v stabilnosti gibanja (nizki indici sinergije) in agilnosti (krajše in manjše APA). PB je povezana z večjimi okvarami tako v stabilnosti kot okretnosti živčno-mišičnih akcij. Farmakološko nadomeščanje dopamina omili upad obeh, globoka stimulacija možganov pa zgolj okretnost, medtem ko na stabilnost nima vpliva. Po možganski kapi so APA okvarjene, medtem ko (večjih) učinkov na stabilnost ni. Specifično zasnovane vaje lahko izboljšajo kazalnike stabilnosti pri zdravih starostnikih že po eni vadbeni enoti.

Razprava in zaključek: Analiza gibalnih sinergij nam omogoča kvantificiranje okvare v stabilnosti in okretnosti gibanja. Pri okvari stabilnosti oziroma njenem poslabšanju tekom proces staranja so ključnega pomena subkortikalne strukture. Vadba, ki zahteva stabilnost gibanja, veliko obeta z vidika obravnave opaženih poslabšanj.

Ključne besede: stabilnost gibanja, sinergija, anticipacijska prilagoditev sinergije, Parkinsonova bolezen, možganska kap.

Changes in the control of movement stability with age and age-related disorders

Mark L. Latash

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Introduction: Stability of everyday movements is crucial given the unpredictable external forces and continuously changing intrinsic body states. The lecture will review a series of recent studies exploring the changes in movement stability with age and such age-related disorders as Parkinson's disease (PD) and stroke.

Methods: The studies used the framework of the uncontrolled manifold hypothesis to quantify synergies stabilizing steady-state actions with indices of the structure of variance and of motor equivalence, and synergy changes in preparation to quick actions (anticipatory postural adjustments, ASAs) during multi-finger tasks and multi-muscle postural tasks.

Results: Healthy aging is associated with a drop in both movement stability (low synergy indices) and agility (shorter and smaller ASAs). PD is associated with stronger impairments of both stability and agility of actions. Dopamine-replacement drugs improve both, while deep brain stimulation improves agility but not stability. Stroke leads to impaired ASAs with no or little effects of indices of stability. Specially designed exercise can improve stability indices in the healthy elderly within a single session.

Discussion and conclusions: Analysis of motor synergies allows quantifying impairments in both stability and agility of movements. It emphasizes the role of subcortical structures in changed stability with age and age-related disorders. Exercise challenging stability is a promising approach to these disorders.

Keywords: movement stability, synergy, anticipatory synergy adjustment, Parkinson's disease, stroke

O mišični atrofiji in sarkopeniji: mehanizmi in posledice

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Upad v funkcionalni zmogljivosti in omejenost v prilagodljivosti telesa sta najbolj očitni posledici sarkopenije. Zanj je značilen upad v mišični masi, ki ga spremlja zmanjšana mišična jakost. Povezana je s selektivno aktivacijo nekaterih katabolnih poti, zmanjšanje preživetvenih mehanizmov in spremembami v mehanizmih za okrevanje. Ko so mehanizmi homeostaze pri starejših porušeni, je del mišičnega tkiva nadomeščen z vezivno-maščobnim tkivom, ki ne proizvaja sile. Izguba mišične mase je veliko družbeno breme, še posebej ob naraščanju deleža starejše populacije. Za spopadanje s tem problemom je ključno razumevanje molekularnih mehanizmov sarkopenije in delovanja satelitskih celic, katerih aktivacija pomaga ohranjati mišično maso. V tem prispevku bomo govorili o signalnih poteh, ki so vpletene v sarkopenijo in molekularnih mehanizmih, ki modulirajo aktivnost satelitskih celic in mišično regeneracijo.

Ključne besede: sarkopenija, IGF-I, katabolične poti, mišično okrevanje, satelitske celice

Insights into muscle atrophy and sarcopenia: mechanisms and countermeasures

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The decline in functional performance and restriction of adaptability represents the hallmark of sarcopenia. The characteristic loss in muscle mass, coupled with a decrease in strength and force output, has been associated with a selective activation of catabolic pathways, a general reduction in survival mechanisms, and alteration in the repair mechanisms. When homeostatic mechanisms are blunted, as in the elderly, muscle tends to be replaced by non-contractile fibro-adipose tissue, with ensuing loss of muscle function, a phenomenon that poses an outstanding social burden, as the aged population increases. Understanding the molecular mechanisms of sarcopenia and how satellite cell pool is preserved and cells efficiently recruited to maintain muscle mass and function is a key issue in tackling this problem. We will discuss the signalling pathways involved in sarcopenia and the cellular and molecular mechanisms that modulate satellite cell activity and muscle regeneration.

Keywords: sarcopenia, IGF-I, catabolic pathways, muscle regeneration, tissue niche

Staranje, mobilnost in tveganje za padce: merjenje v laboratorijskem okolju in vsakdanjem življenju

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Uvod: S staranjem povezan upad v gibalnih in kognitivnih sposobnostih lahko okrni mobilnost in poveča tveganje za padce pri starejših. Zgodnje prepoznavanje tveganja lahko pripomore k pravočasnemu ukrepanju. Namen tega prispevka je podati pregled nad študijami, ki so kvantitativno ovrednotile mobilnost in tveganje za padec pri starejših osebah, tako z meritvami v laboratorijskem okolju kot v vsakdanjem življenju.

Metode: V eksperimentalnih študijah smo na podlagi kinematični in kinetičnih metod ter z beleženjem mišične aktivacije ovrednotili sposobnost izmikanja oviram, odzivom na motnje ravnotežja in samo-poročano oceno tveganja za padec. V drugem sklopu študij so pridobili podatke o dnevni gibalni aktivnosti 300 preiskovancev, ki so po 1 teden nosili senzorje gibanje, dodatno smo beležili še število padcev.

Rezultati: Pokazali smo, da so s sposobnostjo odzivanja na (ne)pričakovane motnje ravnotežja pomembni prirastek generiranja sile, inhibitorne sposobnosti ter zadostna samo-podoba z vidika fizične sposobnosti. Pri napovedovanju verjetnosti padca spremljanje dnevnega vzorca aktivnosti doda pomemben prispevek.

Razprava in zaključek: Zgodnje prepoznavanje in ukrepanje na področju mobilnosti in kakovosti hoje lahko pripomore k zmanjšanju tveganja za padce pri starejših. Vrednotenje mobilnosti in tveganja za padce mora vključevati sposobnosti preiskovancev, njihove dnevne aktivnosti in njihovo lastno mišljenje o njihovi zmogljivosti.

Ključne besede: preventiva pred padcem, motnje ravnotežja, spremljanje aktivnosti, samozadostnost, upad fizičnih sposobnosti

Ageing, mobility and fall risk: measurements in the lab and in daily life

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Introduction: Age-related physical and cognitive decline can cause mobility problems and falls in older people. Early risk identification can facilitate timely interventions. The aim of my presentation is to give an overview of studies to quantify mobility and fall risk in older people, based on measures obtained in the lab, as well as measures from daily life activities.

Methods: In experimental studies, we measured obstacle avoidance, responses to balance perturbations and self-perceived fall risk, based on kinematic, kinetic and muscle activity patterns. From ambulant studies, we obtained 1-week wearable sensor data from cohorts of 300 participants to calculate their daily life gait quality, and prospective fall incidence during 6-12 months follow-up.

Results: We showed that the rate of muscle force generation, inhibitory abilities and adequate self-perception of physical abilities are important factors when responding to expected and unexpected balance perturbations. Our ambulant studies revealed that measures of the quality of daily life gait have significant added value in predicting falls.

Discussion and conclusions: Early detection and intervention of the quality of mobility and gait can help to prevent falls at later age. Screening of mobility and fall risk should incorporate measures of what people can do (abilities), what they actually do (activities) and what they think they can do (perception).

Keywords: fall prevention, balance perturbations, activity monitoring, self-efficacy, physical decline

Specifični vidiki prehranske obravnave pri starostniku

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Podaljševanje povprečne življenjske dobe prebivalstva sovpada s povečano duševno in fizično sposobnostjo ter kvaliteto življenja starostnika. Kljub temu lahko zdravstvene intervencije in posledična hospitalizacija privedejo do nižje kvalitete življenja starostnika, ki je v celoti odvisen od pomoči drugih. Pri starostnikih v poznem obdobju lahko opazimo značilnosti, kot so polimorbidnost, omejene telesne zaloge beljakovin ter dolgotrajnejše okrevanje s počasnejšim pridobivanjem mišične mase. Pogosto pride do hitre izgube mase skeletnih mišic, zaradi česar je nižja tudi telesna aktivnost, kar privede do pojava psiholoških težav, nestrpnosti in težjemu soočanju s stresnimi situacijami (t.i. krhkost).

Priporočila za prehransko podporo pri starostnikih - Tudi pri posameznikih z dobrim prehranskim statusom, pride po sprejemu v bolnišnico do izgube mišične mase. Prehranska podpora pri starostnikih ima zato pomembno vlogo med samim procesom obravnave in zdravljenja. Določitev realnih in dostopnih ciljev je tako pomemben dejavnik procesa zdravljenja, pri katerem je upoštevano skrbno načrtovana prehrana: (1) Načrtovana količina in sestava prehranske podpore je pomembnejša od poti vnosa hrane; (2) prehranska podpora ne sme privedi do imobilizacije posameznika; (3) bistvenega pomena je spremljanje prehranskih ciljev; (4) nadzor nad prehrano je eden ključen dejavnik procesa izboljšanja zdravstvenega stanja, zlasti v obdobju zdravljenja, okrevanja in tudi v obdobju rehabilitacije; (5) v kolikor je cilj prehranske podpore povečanje mišične mase in s tem mišične funkcije, mora biti količina in sestava hranil bolj anabolična; (6) ob pomanjkanju fizične aktivnosti se zaužita hranila (zlasti maščobe) skladiščijo v maščobnem tkivu.

Pri posameznikih v poznem starostnem obdobju, med akutnim potekom bolezni pogosto pride do izgube neodvisnosti. Prehranska podpora in zgodnja rehabilitacija sta zato ključen del oskrbe vsakega starostnika.

Ključne besede: prehranska obravnava, starostniki, prehranska podpora

Specific aspects of nutritional treatment of very old patients

Luboš Sobotka

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There is a significant prolongation of average life expectancy of population, which is associated with increased mental and physical capacity and quality of life of older people. However, complicated medical intervention and subsequent hospital stay can lead to decreased quality of life of older people who are fully dependent on help of other persons. Very old patient has several characteristics, such as: polymorbidity, limited body protein reserve and slow recovery and muscle mass gain. They lose easily their skeletal muscles; subsequent loss of physical activity and associated psychological problems makes older patients extremely susceptible to any stress (so called frailty).

Recommendation for nutrition support in older patients - Even well-nourished persons admitted to the hospital starts to lose the lean body mass. The nutrition support plays indispensable role in the treatment of such patients. Determination of the realistic and accessible outcomes is important condition of the treatment and precise nutrition must always be included into the treatment plans: (1) the planned amount and composition of nutrition support is more important than the way of nutrient administration; (2) nutrition support must not lead to immobilization of the patient; (3) control of nutritional goals and absorption is essential; (4) nutrition management must be essential part of treatment especially during period of healing, recovery and essentially also during rehabilitation period; (5) if the goal on nutrition support is to increase muscle mass and hence the muscle function then see the amount and composition of nutritional substrates should be more pro anabolic; (6) without physical activity, ingested substrates (especially fat) are stored in adipose tissue.

Older patients are extremely susceptible to lose independency during acute disease. Therefore, nutrition support and early rehabilitation must be indispensable part of treatment of each very old patient.

Keywords: nutritional treatment, old patients, nutrition support

Dobra spolnost v starosti? **Blagostanje na področju spolnosti v starosti**

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Uvod: Starejši odrasli, ki so spolno dejavni, imajo lahko višjo psihološko in telesno blagostanje, kar lahko prispeva k zmanjšanju različnih fizičnih in duševnih težav in motenj. **Cilji:** Analiza blagostanja na področju spolnosti (Sexual Well-Being: SWB) med starejšimi odraslimi in preučiti potencialne pojasnjevalne mehanizme modela SWB na mednarodnem vzorcu starejših.

Metode: Uporabljene so bile različne in številne metode, vključno s pridobivanjem demografskih podatkov in intervjujev. Zbrani so bili podatki za 326 starejših odraslih med 65 in 102 leti. Zbrani podatki so bili analizirani s pomočjo analize vsebine. Povezave med vsebinami in latentne konstrukte smo analizirali z multiplo korespondenčno analizo (Multiple Correspondence Analysis: MCA).

Rezultati: Najpogostejši odgovor intervjuvanih udeležencev v zvezi s SWB je bil "dotikanje in skrb" (18,0 %). Tridimenzionalni model SWB, ki ga sestavljajo „skrb in blagostanje“, „privlačnost, intimnost in dotikanje“ ter „spolni odnosi in užitek“, se je potrdil kot najustreznejši model za starejše odrasle iz Anglije. SWB za starejše odrasle na Portugalskem je razložil tridimenzionalni model: „zdravje in poželenje“, „skrb, erotika in naklonjenost“ in „odnos s penetracijo“.

Razprava in zaključki: Rezultati, predstavljeni v tem prispevku, so poudarili potrebo po proučevanju raznolikosti indikatorjev SWB med starejšimi odraslimi in potrebo po proučevanju kulturnih razlik modela SWB za starejše odrasle.

Ključne besede: starejši, blagostanje na področju spolnosti, multipla korespondenčna analiza, prebivalci Anglije, prebivalci Portugalske

Are Older Adults Well Sexually? Sexual Well-Being in Old Age

Sofia von Humboldt

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Introduction: Older adults who engage in sexual activities may benefit from increasing psychological and physical well-being, which may contribute to reduce a number of physical and mental health problems. **Objectives:** To analyze sexual well-being (SWB) in older adults' perspective and to examine the potential explanatory mechanisms of a SWB overall model, in an older cross-national sample.

Methods: Measures were completed, using a variety of appropriate methods, including demographics and interviews. Complete data were available for 326 older adults aged between 65-102 years. Data were subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA).

Results: The most prevalent response of the interviewed participants for SWB was "touching and caring" (18.0%). A three-dimension model formed by "care and well-being", "attractiveness, intimacy and touching", and "sexual intercourse and pleasure" was presented as a best-fit solution for English older adults. SWB for Portuguese older adults were explained by a three-factor model: "health and desire", "care, eroticism and affection" and "penetration sex".

Discussion and Conclusions: The outcomes presented in this paper emphasized the need to explore the diversity of indicators of SWB among older adults and the cultural differences of a SWB model for older adults.

Keywords: older adults, sexual well-being, multiple correspondance analysis, English, Portuguese

Konferenčni povzetki
Conference abstracts

Sekcija/Section
Problemi in izzivi v prehrani starostnikov
Nutrition problems and challenges
in the elderly

Vabljeni predavanje Invited lecture

Izzivi dolgožive družbe in prehrana starostnika

Mojca Gabrijelčič Blenkuš

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Uvod: Staranje je povezano s fiziološkimi telesnimi spremembami, spremembami sestave telesa, gibalnih in miselnih vzorcev ter spremembami vnosa in potrebe hranilnih snovi, s spremembami beljakovinskega metabolizma in pogosto zmanjšano telesno maso, kar posledično poveča tveganje za sarkopenijo, tudi pri osebah s prekomerno telesno težo.

Metode: V zadnjih nekaj letih se je Nacionalni inštitut za varovanje zdravja udeležil dveh pomembnih projektov na področju staranja – projekta raziskovalnih in praktičnih usmeritev PANGeA (<http://www.pangeaeu.org/>) ter projekta AHA.SI (www.staranje.si), v okviru katerega so bile pripravljene podlage za medresorske ukrepe strategije dolgožive družbe.

Rezultati: V projektu PANGeA so bila pripravljena priporočila za prehrano starejših odraslih, ki živijo doma v lokalnih skupnostih, s posebnim poudarkom na krhkosti. Priporočila temeljijo na študiji ležanja in množičnih meritvah. Rezultati projekta PANGeA so bili vključeni v vsebine projekta AHA.SI, v okviru katerega so bile pripravljene podlage za strategijo dolgožive družbe, ki so bile usklajene s številnimi deležniki. Podlage so bile neposredno uporabljene v procesu priprave Strategije dolgožive družbe (SDD), ki jo je sprejela vlada v letu 2017.

Razprava in zaključek: Slovenska družba se hitro stara, zato je vzdrževanje aktivne in zdrave populacije do starosti in v starosti izjemnega pomena. Ureditev področja je predpogoj za gospodarsko uspešnost družbe in blaginjo njenih prebivalcev.

Ključne besede: staranje, krhkost, prehrana starostnika

Challenges of longevity society and nutrition for older adults

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Introduction: Aging is associated with physiological body changes, changes in body composition, movement and thought patterns, changes in nutritional intake and needs, changes in protein metabolism and often decreased body weight, which in turn increases the risk of frailty and sarcopenia, even in people with overweight.

Methods: In the past five years National Institute of Public Health Slovenia took part in two important projects in the area of ageing – research and practice oriented PANGeA (<http://www.pangeaeu.org/>) and intersectoral and policy supportive of AHA.SI project (www.staranje.si).

Results: Nutrition recommendations for older adults living at home and in local communities, with special emphasis on frailty, were prepared in the PANGeA project, based on bed rest study and mass measurements. The results of the PANGeA project were included in AHA.SI project, within which the background documents for longevity strategy were prepared, which were harmonized with many stakeholders. The AHA.SI outcomes were directly used in the process of preparing the Longevity Strategy (SDD), adopted by the Slovene Government in 2017.

Discussion and conclusions: Slovene society is rapidly aging, therefore maintaining an active and healthy population up to the oldest age is of extreme importance. The national strategic orientation in the field is a prerequisite for the economic success of society and the well-being of its inhabitants.

Keywords: ageing, frailty, nutrition for older adults

Pomen beljakovin v prehrani starostnika

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Starostnika opišemo kot osebo starejšo od 65 let. Staranje je proces, ki se prične že z rojstvom in ga ne moremo preprečiti. S staranjem pride do sprememb v sestavi telesa na račun zmanjševanja mišične mase in funkcije mišic ter povečevanja deleža maščobne mase. Za zagotovitev kakovostnega in funkcionalnega življenja v starosti je pomemben zdrav življenjski slog, ki vključuje dovolj gibalno telesne aktivnosti in uravnoteženo prehrano z visoko hranilno gostoto in zadostnim vnosom beljakovin. Ravno slednje so pomembne za ohranjanje mišične mase starostnikov. Zaradi sprememb v presnovi beljakovin in zmanjšanemu anabolnemu odzivu na vnesene beljakovine se potrebe po beljakovinah v starosti povečajo. Nezadosten beljakovinski vnos je povezan z nastankom določenih bolezni v starosti kot je sarkopenija kar posledično lahko poveča tveganje za zlome in padce, izgubo samostojnosti, invalidnost in umrljivost. Namen prispevka je tako podati priporočila za zadosten vsakodnevni beljakovinski vnos, ki bi pripomogel k ohranjanju zdravja in funkcionalnosti starostnikov. Priporočila bodo podana na osnovi pregleda znanstvenih raziskav, ki so povezane z vnosom beljakovin in ohranjanjem mišične mase ter funkcije mišic pri starostniku.

Ključne besede: beljakovine, mišična masa, funkcionalnost, starostnik.

The importance of protein intake in older adults

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An older adult is defined as a person aged 65 years or over. Aging is a process that starts already at birth and cannot be prevented. Aging is associated with changes in body composition in terms of a decline in muscle mass and function, and an increase in the percentage of body fat. Healthy lifestyle that includes sufficient physical activity and a balanced diet with high nutritional density and adequate protein intake is important for quality and functional life in old age. Because of age-related changes in protein metabolism and declined anabolic response to ingested protein, need for protein increases in the elderly. Insufficient protein intake is associated with certain age-related diseases such as sarcopenia which can increase the risk of fractures and falls, loss of independence, disability and mortality. The purpose of this paper is to provide recommendations for an adequate daily protein intake that would maintain health and maximize function in older adults. A review of scientific research related to protein intake and the preservation of muscle mass and function in the elderly was carried out accordingly.

Keywords: proteins, muscle mass, functionality, older adults.

Mikrobiološka obremenitev v proizvodnji medicinskih pripomočkov

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Uvod: Verjetnost kroničnih in duševnih bolezni, fizične oslabelosti, ter drugih pridruženih stanj s starostjo narašča. Posledično je več tudi zdravstvenih obravnav, ki zahtevajo uporabo medicinskih pripomočkov (MP), kot so katetri, sistemi za infuzijo, dializo ali parenteralno hranjenje. Čeprav so okužbe z MP največkrat bolnišnične, lahko do kontaminacije z mikroorganizmi in njihovimi metabolnimi produkti pride že med procesom izdelave.

Metode: S pregledom rezultatov standardiziranih metod, izvedenih v proizvodnji MP, smo skušali najti vire kontaminacije z mikroorganizmi. Rezultati so obsegali meritve števila delcev v zraku, mikrobiološko obremenitev zraka, površin, vode in končnega izdelka ter določanje prisotnosti endotoksinov. Preverili smo tudi učinkovitost umivanja rok delavcev.

Rezultati: Mikrobiološke analize so pokazale: (a) največje število prašnih delcev v zraku je na mestih velikega pretoka ljudi, ter pri strojih; (b) mikrobiološka obremenitev zraka je bila najvišja na površini škatel s sestavnimi deli MP; (c) voda ni bila fekalno onesnažena; (d) metoda razkuževanja rok se je pokazala za najbolj učinkovito.

Razprava in zaključek: Znotraj proizvodnje potencialnega vira endotoksigenih bakterij nismo našli. Tveganje za kontaminacijo predstavlja nepreverjen vhodni material in pa neupoštevanje higienskih načel zaposlenih. S higiensko ustreznim procesom izdelave lahko zagotovimo varne MP, ki dodatno ne ogrožajo zdravstvenega stanja dovzetnejših skupin, kot so starostniki.

Ključne besede: medicinski pripomočki, mikrobiološka obremenitev, endotoksini, tveganje za zdravje

Microbiological contamination in the manufacture of medical devices

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Introduction: The risk of chronic and mental illness, physical weakness, and other associated conditions increases with age. Also there is a number of medical treatments that require the use of medical devices (MD) such as catheters, infusion, dialysis or parenteral feeding systems. Although MD infections are mostly hospital acquired, contamination with microorganisms and their metabolic products may occur during the manufacturing process.

Methods: The aim was to find the main source of MD microbial contamination in the production process. The air particle measurements, the microbial contamination of the air, surfaces, water and final products and the presence of endotoxins were included. The hand hygiene of workers was also tested.

Results: The results of microbiological analyses showed the following: (a) the maximum number of dust particles was at the entrances, with a large flow of people, as well as near the machines; (b) the microbiological contamination was the highest on PVC boxes with MD components; (c) water was not faecally contaminated; (d) hand disinfection was proven to be most effective.

Discussion and conclusions: Within the production process a potential source of endotoxigenic bacteria could not be found. Nevertheless, the input material and hygienic practice among employees in MD production still remains a risk factor. MD without additional health risk for susceptible groups such as the elderly can be provided with appropriate hygiene during production.

Keywords: medical devices, microbiological contamination, endotoxins, health risks

Motnje prehranjevanja v starejšem življenjskem obdobju

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Uvod: Zdrava in uravnotežena prehrana je pomemben dejavnik zdravega načina življenja v vseh starostnih obdobjih. Zavedati se je potrebno, da se prehranske potrebe s staranjem spreminjajo in temu ustrezno prilagajati dnevni režim prehranjevanja. Namen prispevka je pregledati obstoječe raziskave na področju podhranjenosti starejših oseb, predstaviti najpogostejše motnje prehranjevanja in vzroke zanje z namenom preprečevanja podhranjenosti ter zmanjšanja obolevnosti med starejšimi osebami in s tem vzdrževanje ali izboljšanje prehranskega stanja.

Metode: Uporabljena je bila deskriptivna metoda dela s pregledom domače in tuje strokovne literature v bazi podatkov EBSCOhost, PubMed, Web of Science in Wiley ter vzajemno bibliografsko-kataloško bazo podatkov (COBIB.SI).

Rezultati: Pri pregledu literature je bilo ugotovljeno, da je v starosti zelo pogost pojav prehranskih in presnovnih motenj, ki so vzrok za slabšo kakovost življenja v poznem življenjskem obdobju.

Razprava in zaključek: Razlogi za nezadosten vnos hrane pri starejših so številni, vendar bi z ustreznimi programi izobraževanja in osveščanjem ter s pravočasnim in ustreznim identificiranjem podhranjenih in ogroženih posameznikov lahko pripomogli k zmanjšanju nastanka motenj prehranjevanja.

Ključne besede: zdrava prehrana starejših, podhranjenost starejših, preprečevanje podhranjenosti, motnje prehranjevanja

Nutrition disorders in the elderly living period

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Introduction: A healthy and balanced diet is an important factor in a healthy lifestyle in all age groups. It is important to be aware that dietary needs change with age and adjust the daily diet regime accordingly. The purpose of this paper is to review existing research in the field of malnutrition of the elderly, present the most common nutritional disorders and the causes for them in order to prevent malnutrition and to reduce the morbidity among the elderly and thus maintain or improve nutritional status.

Methods: A descriptive method of working with a review of domestic and foreign professional literature in the database EBSCOhost, PubMed, Web of Science, Wiley and the shared bibliographic-catalogue database (COBIB.SI) was used.

Results: In the literature review, it was found that in older age frequently occurs dietary and metabolic disorders, which are the cause of a poor quality of life in the late life.

Discussion and conclusions: There are many reasons for insufficient food intake for older people, but appropriate education and awareness programs and timely, appropriate identification of malnourished individuals and those with risk of malnutrition, can help reduce the frequency of nutrition disorders.

Keywords: healthy nutrition of the elderly, malnutrition of the elderly, prevention of malnutrition, nutrition disorders

S čebeljimi pridelki proti težavam in izzivom v prehrani starostnikov

Nina Ilič

Zavod za razvoj empatije in ustvarjalnosti Eneja, Cesta Dolomitskega odreda 12a, 1000 Ljubljana, Slovenija

Osnova težav v življenju starostnikov je izsuševanje, slabša kakovost skeletnega sistema, slabša aktivnost organov ter žlez z notranjim izločanjem. Tudi slabe prehranjevalne navade in nezdrav način življenja pokažejo posledice v starosti. Dodaten izziv predstavlja slaba prilagodljivost starostnika na kakršne koli spremembe. Živila nižjega cenovnega razreda so slabše kakovosti ter pogosto niso živila lokalne pridelave. Čebelji pridelki s primernim skladiščenjem so zdravo in dlje časa obstojno sredstvo za krepitev zdravja. Potrebe starejšega organizma narekujejo optimalen vnos antioksidantov, vnos večje količine vitaminov in mineralov, redne obroke, veliko raznolikost v vnosu hranil, sezonsko in lokalno pridelano hrano ter čebelje pridelke v različnih oblikah konzumacije: kulinarčno, kot prehranski dodatek, aromaterapija in nega telesa. Čebelji pridelki s svojo sestavo omogočajo naraven in neškodljiv vnos antioksidantov, vitaminov, mineralov in še vrsto drugih človeškemu organizmu koristnih snovi ter ob tem ne delujejo negativno na pridružene bolezni starostnika. Ciljno naravnana konzumacija medu, matičnega mlečka, cvetnega prahu in propolisa ob upoštevanju njihovih splošnih, fizioloških, kemijskih in farmakoloških lastnosti, omogoča večjo kvaliteto življenja v tretjem življenjskem obdobju. Kakovostni čebelji pridelki služijo kot hrana in kot zdravilo. Uporaba čebeljih pridelkov je namenjena izboljšanju psihofizičnega stanja in preprečevanju bolezni.

Ključne besede: čebelji pridelki, zdravje, starostniki

Against difficulties and challenges in nutrition of elderly

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The basis of the problems in the life of the elderly is draining, poorer quality of the skeletal system, poorer activity of organs and internal secretion glands. Bad eating habits and an unhealthy way of life show the consequences in old age also. Another challenge is the poor adaptability of the elderly on any changes. Foods of lower price range are of lower quality and often are not food of local production. With the appropriate storage, bee products are healthy and longer-lasting means for enhancement of health. The needs of older organisms require optimal intake of antioxidants, a higher amount of vitamins and minerals, regular meals, a lot of diversity in nutrient intake, seasonal and locally grown food and bee products in various forms of consummation: culinary, as a dietary supplement, aromatherapy and body treatments. With their structure, bee products enable the natural and innocuous intake of antioxidants, vitamins, minerals and a number of other useful substances for human organism, and they do not act negatively on elderly diseases. The targeted consumption of honey, royal jelly, pollen and propolis, in the light of their general, physiological, chemical and pharmacological properties, enables a higher quality of life in the third life cycle. Quality bee products serve both as food and as a medicine. The use of bee products is intended to improve the psycho-physical condition and disease prevention.

Keywords: bee products, health, elderly

Vpliv uživanja različnih vrst kruha na krvni sladkor in občutek sitosti

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Uvod: V raziskavi smo ugotavljali prehranjevalne navade uživanja kruha, kot so pogostost, količina, vrsta in starost kruha ter vpliv različnih vrst kruha na krvni sladkor in občutek sitosti.

Metode: Uporabili smo metodo anketnega vprašalnika, ki ga je izpolnilo 131 anketirancev. Porast krvnega sladkorja v kapilarni krvi smo merili pri 10 zdravih osebah in 20 sladkornih bolnikih. Kontrola je bila opravljena po zaužitju belega in polnozrnatega, svežega in staranega kruha.

Rezultati: Rezultati kažejo, da večina anketirancev uživa polnozrnat kruh v količinah do 200 g enkrat ali dvakrat dnevno. Pokazala se je statistično pomembna razlika, ki nakazuje, da osebe z večjo telesno maso redkeje uživajo kruh, osebe z manjšo maso pa pogosteje. Več oseb s prekomerno telesno maso je tudi navajalo, da kruh po njihovem mnenju vpliva na porast telesne mase. Rezultati raziskave so pokazali, da vrsta kruha vpliva na občutek sitosti pri zdravih odraslih in sladkornih bolnikih. Pri opazovanju občutka sitosti so vsi udeleženci navajali, da so bili najhitreje lačni po zaužitju svežega belega kruha, nekoliko kasneje pri staranem belem kruhu, še kasneje pri svežem polnozrnatem kruhu. Najdaljši občutek sitosti so navajali udeleženci po zaužitju starega polnozrnatega kruha.

Razprava in zaključek: Raziskava potrjuje vpliv prehranske vlaknine in retrogradiranega škroba na podaljšan občutek sitosti in manjši porast krvnega sladkorja po zaužitju.

Ključne besede: kruh, krvni sladkor, prehranjevalne navade

Influence of consuming different sorts of bread on blood sugar and satiety

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Introduction: In this research we explored the eating habits of bread, such as the frequency, quantity, type of bread and age, and the influence of different types of bread on blood sugar in a sense of satiety.

Methods: In this study, we used the method of a questionnaire among 131 adults. The change of blood sugar in capillary blood was measured in 10 healthy people and 20 diabetics. Blood sugar was measured 90 minutes after consuming white and full grain, fresh and aged bread.

Results: The results show that most respondents consume full-grain bread in amounts up to 200 g once or twice a day. A statistically significant difference indicates that people with a higher body weight rarely consume bread than people with a lower weight. Several overweight people expressed the opinion that bread affects weight gain. The results of the study show that the type of bread affects the sense of satiety in healthy adults in diabetics. When observing the sense of satiety, all the participants state that they were hungry the fastest after consuming fresh white bread, a little later after the aged white bread, and later after the fresh whole-grain bread. The participants listed the longest feeling of satiety after consuming the old whole-grain bread.

Discussion and conclusions: The study confirms the effect of dietary fiber and retrograded starch on the extension of the satiety and a small increase of blood sugar after ingestion.

Keywords: bread, blood sugar, eating habits

Učinki ustreznih količin omega-3 maščobnih kislin na srce in ožilje v starosti

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Uvod: Srčno-žilna obolenja predstavljajo pomemben dejavnik tveganja, saj so samo na področju EU letno razlog za preko 1.8 milijona smrti (37 %). Leta 2015 je bilo odkritih 6.1 milijona novih primerov, skupno število pa je istega leta doseglo že skoraj 50 milijonov. Pomemben dejavnik predstavlja prehrana, ki ob neustreznosti lahko pospeši pojav bolezni, če je ustrezna, pa lahko predstavlja varovalni dejavnik. Poseben izziv pri tem predstavlja skupina starostnikov, saj njihov delež med prebivalstvom narašča, njihove energijske potrebe pa so manjše, kar povečuje tveganje za prenizek vnos hranil.

Metode: Uporabljena je bila deskriptivna metoda dela s kritičnim pregledom znanstvene ter strokovne literature v slovenskem in angleškem jeziku. Obdelava podatkov je bila izvedena z uporabo metaanalize. Uporabili smo literaturo v obdobju od 2007 do 2017.

Rezultati: Pri skupini starostnikov se kaže večja potreba po uživanju nutracevtikov, kot so omega-3 maščobne kisline. Njihov vnos bi za predviden učinek zmanjševanja srčno-žilnih zapletov moral dosegati vsaj 0,5 g več od priporočene dnevne količine. To zaradi zmanjšane vnosa hrane in posledične potrebe po drugačni sestavi obrokov predstavlja glavni izziv.

Razprava in zaključek: Na podlagi že izvedenih raziskav in ugotovitev bodo predstavljene smernice za nadaljnje raziskave in doseganje uživanja zadostnih količin omega-3 maščobnih kislin pri starostnikih.

Ključne besede: zdravje starostnikov, prehrana starostnikov, nutracevtiki, srčno-žilna obolenja, omega-3

Sufficient omega-3 fatty acid effects on cardiovascular system in the elderly

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Introduction: Cardiovascular diseases represent a significant risk factor. In the EU alone, they result in over 1.8 million deaths annually (37 %). In 2015, 6.1 million new cases were discovered and their total number rose to almost 50 million. Diet plays an important role, because when it is unhealthy, it can make the disease worse. But when it is healthy, diet can act as a protective factor against cardiovascular diseases. The elderly pose a special challenge, because they represent an increasingly big part of our population. They also have lower caloric intake needs, which puts them at a higher risk of malnutrition.

Methods: In this paper, descriptive research method with a critical review of Slovene and English professional and scientific literature was used. We conducted a meta-analysis, using studies published between 2007 and 2017.

Results: In the elderly, higher consumption of nutraceuticals, such as omega-3 fatty acids, seems necessary. The amount of omega-3 fatty acids required to lower the risk of cardiovascular complications is expected to be at least 0.5 g higher than the daily recommended amount. Lower food consumption and consequential need to find the right meal composition therefore represent the biggest challenges.

Discussion and conclusions: Based on previous research and findings, guidelines for further research and sufficient omega-3 consumption among the elderly will be presented.

Keywords: health of the elderly, elderly diet, nutraceuticals, cardiovascular disease, omega-3

Prehranska obravnava starostnikov v domovih za starejše

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Uvod: Število starostnikov se povečuje, saj se življenjska doba daljša. Podhranjenost je razširjena tako med starostniki, ki živijo doma, so hospitalizirani ali živijo v domovih za starejše. Neprimerno prehransko stanje vpliva na kvaliteto življenja, večja tveganje za bolezni in povečuje umrljivost. S prehransko obravnavo želimo oskrbovancem izboljšati kvaliteto življenja, prav tako pa osmisliti vlogo dietetika v domovih za starejše, kjer zaenkrat ni del kadrovske strukture.

Metode: Raziskava je potekala od aprila 2017 do marca 2018 v sedmih domovih za starejše. Vključenih je bilo 1310 oskrbovancev, starejših od 65 let. Na podlagi MNA (Mini Nutritional Assessment) smo identificirali prehransko ogrožene oskrbovance. Glede na stopnjo prehranske ogroženosti smo določili primerno prehransko podporo.

Rezultati: Začetno presejanje je pokazalo, da je v domovih za starejše primerno prehranjenih 50,6 % oskrbovancev, prehransko ogroženih je 29,2 % in podhranjenih 20,2 %. V marcu 2018 je primerno prehranjenih 46,6 %, prehransko ogroženih 39,9 % in podhranjenih 13,5 %, kar kaže na uspešnost prehranske obravnave.

Razprava in zaključek: S prehransko obravnavo pričnemo pri sprejemu novih oskrbovancev, saj zgodnje prepoznavanje podhranjenosti in primerni ukrepi vplivajo na kvaliteto življenja. Spoznavamo tudi nove pristope k prehranski obravnavi in širimo spekter ukrepov, ki bo oskrbovancem zagotovil zdravo starost. Hkrati želimo poklic dietetika vpeljati v vse domove za starejše.

Ključne besede: prehransko presejanje, podhranjenost, starostniki, dom za starejše

Nutritional treatment of elderly in Nursing Homes

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Introduction: The number of elderly individuals is increasing, due to longer life expectancy. Malnutrition is widespread among the elderly living at home, hospitalized or in nursing homes. Inadequate nutritional status affects the quality of life, increases morbidity and mortality. With the introduction of nutritional treatment, we want to improve the quality of life for our residents, as well as to improve the role of dietitians in nursing homes.

Methods: The research was conducted from April 2017 to March 2018 in seven nursing homes. 1310 residents were included, aged 65 years or more. On the basis of MNA (Mini Nutritional Assessment), we identified undernourished residents. Depending on the evaluation of nutritional risk, we have established appropriate nutritional support.

Results: Initial screening showed that in nursing homes, 50.6 % of residents has good nutritional status, 29.2% were at risk of malnutrition and 20.2 % malnourished. In March 2018 46.6% had good nutritional status, 39.9 % were at risk for malnutrition, and 13.5 % malnourished, showing the effectiveness of nutritional treatment.

Discussion and conclusions: We begin nutritional treatment for every new resident, since early recognition of malnutrition and appropriate measures significantly affect quality of life. We are learning new approaches to nutritional treatment and are expanding the range of measures that will provide healthy life for residents. At the same time, we want to improve the role of dietitian in all nursing homes.

Keywords: nutrition screening, malnutrition, elderly, nursing home

Percepcije prehrane pri starejših osebah v domskem okolju: pilotna študija

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Uvod: Raziskave prehranjenosti pri starejših potrjujejo ranljivost te skupine ljudi, še posebno v institucionalnem varstvu. V raziskavi smo se zato usmerili na različne vidike percepcije prehrane pri starejših v domskem okolju.

Metode: Vprašalnik je vključeval 15 vprašanj zaprtega (demografske značilnosti; zaznana količina in kakovost obrokov; različni vidiki zadovoljstva s prehrano) in odprtega tipa (prehranjevalne navade pred vstopom v domsko okolje; predlogi za izboljšanje prehrane). Instrument smo pilotno preizkusili na vzorcu (n=34) starejših v domskem okolju v Sloveniji. Pri analizi smo uporabili deskriptivne statistike ter kvalitativno analizo odgovorov.

Rezultati: V povprečju so udeleženci najvišje ocenili zadovoljstvo (1-zelo nezadovoljen; 5-zelo zadovoljen) z izgledom hrane ($x=4,11$; $s=0,64$), s postrežbo ($x=4,43$; $s=0,50$), z omogočanjem kulturnega in umirjenega uživanja hrane ($x=4,48$; $s=0,50$) ter z vedenjem osebja med razdeljevanjem hrane ($x=4,54$; $s=0,50$). Najnižje so ocenili okus ($x=3,84$; $s=0,71$) in količino hrane ($x=3,87$; $s=0,78$). Odprti odgovori so pokazali, da udeleženci presojujejo kakovost prehrane predvsem v povezavi s svojimi predhodnimi navadami.

Razprava in zaključek: Upoštevanje prehranjevalnih navad starejših iz časa pred vstopom v domsko oskrbo je pomemben dejavnik v individualnem pristopu prehranske obravnave, kar pripomore k izboljšanju kakovosti življenja starejših v domskem okolju.

Ključne besede: starostnik, holistični pristop, prehranjevalne navade, institucionalno varstvo

Food and meals perceptions of the elderly in nursing home context: a pilot study

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Introduction: Nutritional studies of elderly confirm the vulnerability of this group especially in institutional care. In the study, we therefore focused on various aspects of food and diet perceptions of elderly in the nursing home.

Methods: The questionnaire included 15 closed (demographics, perceived quantity and quality of food, different aspects of satisfaction with the diet) and open-ended items (eating habits before entering the nursing home, suggestions for improvements). The instrument was piloted on a sample (n=34) of elderly in Slovenian nursing home. The descriptive statistics and qualitative analysis were used for data analysis.

Results: In the average, participants rated the highest satisfaction (1-absolutely unsatisfied; 5- absolutely satisfied) with food appearance ($\bar{x}=4,11$; $s=0.64$), meals serving ($\bar{x}=4,43$; $s=0.50$), with the possibility to consume the meals in a cultural and calm manner ($\bar{x}=4.48$; $s=0.50$), and with behaviour of nursing home staff during food distribution ($\bar{x}= 4.54$; $s=0.50$). The taste ($\bar{x}=3.84$; $s=0.71$) and the amount of food ($\bar{x}=3.87$; $s=0.78$) were the lowest rated aspects of satisfaction. The open responses showed that participants assess the quality of food and diet in relation with their past eating habits.

Discussion and conclusions: Food is an important factor of the quality of life in nursing homes. An individualised approach with taking into account elderly eating habits from the time before entering nursing home is needed.

Keywords: elderly, holistic approach, eating habits, institutional care

Prehranjenost starostnikov ob sprejemu na kirurški oddelek

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Uvod: Mnogo starostnikov je pri sprejemu v bolnišnico podhranjenih, kar upočasni okrevanje, poslabša kakovost življenja bolnika, poveča resnost in število zapletov, podaljšuje čas hospitalizacije in stroške zdravljenja.

Metode: Raziskava je potekala na kirurškem oddelku Splošne bolnišnice Izola od januarja do maja 2016. K raziskavi smo zaporedno povabili bolnike s starostjo 65 let in več v roku 48 ur od sprejema. Opravili smo antropometrične, bioimpedančne in funkcionalne meritve ter prehransko presejanje z NRS 2002, na podlagi katerega smo bolnike razvrstili v skupini s povečanim prehranskim tveganjem in brez prehranskega tveganja, jih prehransko ocenili ter jim določili prehransko stanje.

Rezultati: Od 67 akutnih bolnikov (64 % moških), $77,0 \pm 7,9$ let, $ITM 28,4 \pm 4,4$ kg/m² ($ITM \geq 25$ kg/m²: 54 (81 %)), jih je bilo pod povečano prehransko tveganje uvrščenih 39 (58 %), od tega 11 (28 %) z normalno telesno maso (TM), 16 (41 %) s prekomerno TM in 12 (31 %) s prisotno debelostjo. Skupina bolnikov s povečanim prehranskim tveganjem je imela nižji indeks puste telesne mase, fazni kot in stisk roke.

Razprava in zaključek: Kljub temu, da je 81 % bolnikov v vzorcu imelo $ITM \geq 25$ kg/m², je bilo v kategorijo s povečanim prehranskim tveganjem uvrščenih 58 % bolnikov. V primeru, da bi pri prepoznavanju podhranjenosti bolnikov upoštevali le mejno vrednost ITM za podhranjenost (< 20 ali ≤ 22 kg/m²), bi določili le 8 % podhranjenih bolnikov.

Ključne besede: starostniki, prehransko presejanje, prehranska ocena, prehransko stanje, podhranjenost

Nutritional status of older adults admitted to the Surgical Ward

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Introduction: A substantial number of older adults are malnourished at the time of hospital admission, which negatively influences their recovery time, quality of life, possible complications, length of hospital stay and costs of treatment.

Methods: The study was conducted at the Surgical Ward of the Izola General Hospital between January and May 2016. All patients aged 65 years or older were invited to the study within 48 hours after being admitted to the ward. Nutritional examinations were carried out with anthropometric, bioimpedance and functional measures and with NRS-2002, based on which patients' nutritional status was defined, patients were nutritionally assessed and classified into two groups; one with increased nutritional risk, the other without it.

Results: Out of 67 acute patients (64 % male), 77.0 ± 7.9 years, $BMI 28.4 \pm 4.4$ kg/m² ($BMI \geq 25$ kg/m²: 54 (81 %)) in the study, 39 (58 %) had increased nutritional risk, 11 (28 %) had normal body masses, 16 (41 %) were overweight and 12 (31 %) obese. The group with increased nutritional risk had lower fat free mass index, phase angle and hand grip strength.

Discussion and conclusions: Despite the fact that 81 % of patients' $BMI \geq 25$ kg/m², 58 % of them were grouped as patients with increased nutritional risk. If the nutritional status of patients were determined using only the BMI cut-points for malnutrition (< 20 or ≤ 22 kg/m²) only 8 % of patients would be classified as malnourished.

Keywords: older adults, nutritional screening, nutritional assessment, nutritional status, malnutrition

Do boljšega kognitivnega zdravja s prehrano

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Uvod: Hrana je pogosto lahko tudi zdravilo. Prehrana starostnikov bi morala biti prilagojena njihovim specifičnim potrebam. Procesi staranja prizadanejo tudi možgane in kognitivne sposobnosti posameznika začnejo pešati. Določene prehranske intervencije morda lahko to pešanje upočasnijo.

Metode: Uporabljena je bila deskriptivna metoda dela. Izbrani raziskovalni pristop je bil sistematični pregled najnovejših znanstvenih objav na področju prehranskih prilagoditev z namenom ohranjanja kognitivnega zdravja starostnikov.

Rezultati: Prehranske intervencije so verjetno bolj učinkovite pri posameznikih s slabšim prehranskim statusom, ali pa kot del integrirane oskrbe starostnikov, kjer poskušamo vplivati na več dejavnikov življenjskega sloga hkrati.

Razprava in zaključek: V prehrano za boljše kognitivno zdravje je smiselno vključiti antioksidante, vitamine B skupine in omega-3 maščobne kisline. Rezultati več longitudinalnih raziskav na osnovi opazovanja so v preteklosti že nakazali, da določene hranilne snovi lahko preprečijo nastanek ali upočasnjujejo napredovanje kognitivnega upada ali celo demence. Malo pa je rezultatov metodološko neoporečnih randomiziranih raziskav, ki bi zagotovo potrdili ali ovrgli to hipotezo. Potrebna bo še več raziskovanja na tem področju.

Ključne besede: kognitivno zdravje, staranje, prehrana

Better cognitive health through nutrition

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Introduction: Food can often serve as medicine. The diet of the elderly should be adapted to their specific needs. The physiological processes of aging also affect the brain and the individual's cognitive abilities begin to decline. Certain dietary interventions may possibly slow down this decline.

Methods: A descriptive method was used. The selected research approach was a systematic review of the latest scientific literature in the area of nutritional changes aimed to preserve the cognitive health of the elderly.

Results: Nutritional interventions are probably more effective in individuals with poor nutritional status or as part of an integrated care for the elderly, focusing on several lifestyle factors simultaneously.

Discussion and conclusions: Nutrition for better cognitive health should include antioxidants, B complex vitamins, omega-3 fatty acids. The results of several longitudinal studies have already indicated that certain nutrients can prevent or slow down the progression of cognitive decline or even dementia. However, there are few results of methodologically flawless randomized studies that would certainly confirm or disprove this hypothesis. More research is needed in this area.

Keywords: cognitive health, aging, nutrition

Izzivi za dietetika v prehranski obravnavi starostnika

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Dietetik ima, kot član multidisciplinarnega tima, ključno vlogo pri preprečevanju podhranjenosti in prehranski obravnavi podhranjenih starostnikov. Izzivi za kliničnega dietetika v prehranski obravnavi starostnika obsegajo pet področij. Dejavniki vezani na bolnika, ki pomembno vplivajo na povečano tveganje za podhranjenost pri starostnikih in napredovanje sarkopenije so: spremenjene energijsko-hranilne potrebe, kronične bolezni, uživanje zdravil, prehranski problemi, zmožnost za samostojno hranjenje, telesna zmogljivost in telesna dejavnost, kognitivne sposobnosti, ekonomsko socialne okoliščine in druge. Institucionalni dejavniki so: dostopnost do individualne prehranske obravnave in svetovanja, kakovostna prehrana ter druge. Prepoznavanje podhranjenosti: Čeprav je orodje za prehransko presejanje mini prehranska ocena - MNA (mini nutrition assesment) pripravljeno specifično za uporabo pri starejših nad 65 letom starosti, natančnega orodja, s katerim bi ovrednotili prehransko stanje pri starostnikih še ni. Dietetik se ne more zanašati samo na presejalno orodje, vedno mora biti v ospredju klinična presoja, ki jo mora opraviti sam, kar zahteva strokovno znanje, izkušnje in usposobljenost. Ocena prehranskega stanja: Prehranski pregled je diagnostičen postopek, s katerim ocenimo prehransko stanje starostnika. Prehranska terapija in svetovanje sta osrednji del prehranske podpore starostnikov, pomenita uporabo učinkovitih prehranskih in drugih strategij.

Ključne besede: klinična dietetika, prehrana starostnika, prehranska obravnav

Challenges for dietitians in nutritional support of elderly

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A dietitian as a member of multidisciplinary team plays a key role in the prevention of malnutrition and nutritional support in the elderly. Challenges for clinical dietitian include five areas. Factors bound to the patient: early identification of those factors which significantly affect the increased risk of malnutrition and the progression of sarcopenia. These factors are as follows: modified energy-savings needs, chronic diseases, consumption of medicinal products, nutritional problems, the ability for self-feeding, physical capacity and physical activity, cognitive skills, economic and social circumstances, etc. Institutional factors are: Access to individual nutritional treatment and counseling, a diet that is high quality and varied, adapted to elderly taste and abilities for independent eating, etc. Identifying malnutrition: Although Mini Nutrition Assessment is a tool for nutritional screening, specifically prepared for use in elderly over 65 years, the tool with which we can accurately evaluate the nutritional status in the elderly still doesn't exist. Thus, in identifying malnutrition a dietitian cannot simply rely on a screening tool, he/she always must carry out clinical judgment for which he/she requires skills. Nutritional assessment is a diagnostic process used to assess the nutritional status of the elderly. Nutritional therapy and counseling is a central part of the nutritional support in elderly, is the use of effective nutrition and other strategies.

Keywords: clinical dietitian, nutrition of the elderly, nutritional treatment

Sekcija/Section

Psihosocialni vidiki prilagajanja na staranje
Psychosocial aspects of adjustment to aging

Vabljeno predavanje Invited lecture

Samospoštovanje in kakovost življenja stanovalcev v domu za starejše in lastnem domu

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Uvod: Mnogo dosedanjih raziskav samospoštovanja in kakovosti življenja je bilo pogosto namenjenih in usmerjenih na mlajšo populacijo. Namen predstavljene presečne študije je bil raziskati zaznavanje samospoštovanja in kakovosti življenja starejših oseb, in ugotoviti, ali obstaja razlika v samospoštovanju in kakovosti življenja starejših, ki živijo doma, in tistimi, ki živijo v domu za starejše občane.

Metode: Uporabljena je bila kvantitativna metoda. V raziskavo je bilo vključenih 204 anketirancev, starih 65 let in več, z ohranjenimi kognitivnimi sposobnostmi iz mesta Osijeka v Hrvaški, od katerih 101 anketiranec (49,5 %) živi v lastni družinski hiši ali stanovanju, 103 (50,5 %) anketirancev pa v domu za starejše občane.

Raziskava je bila izvedena s pomočjo vprašalnika ki je vključeval socialno-demografske podatke, podatke o aktivnosti vprašanih, oceno samospoštovanja, ki je temeljila na Rosenberg self-esteem lestvici (RSES), oceno kakovosti življenja, ki je temeljila na lestvici zadovoljstva z življenjem (SWLS) in oceno funkcionalne sposobnosti. V raziskavi je sodelovalo 41 (20,1 %) moških in 163 (79,9 %) žensk.

Rezultati: V raziskavo vključenih 41 (20,1 %) moških in 163 (79,9 %) žensk je ocenilo samospoštovanje, zadovoljstvo z življenjem in funkcionalno sposobnost kot primerno. Anketiranci v obeh skupinah so izrazili enako zadovoljstvo z življenjem (Mann-Whitney U test, $p = 0.846$). Anketiranci, ki živijo v lastni hiši ali stanovanju imajo višjo samopodobo kot tisti, ki prebivajo v domovih za starejše občane (povprečna razlika RSES 3,4; 95 % interval zaupanja od 1,0 do 5,8, t-test, $p = 0,005$). Anketiranci, ki imajo višje samospoštovanje so bolj zadovoljni z življenjem (Spearman, $s p = 0,537$, $p < 0,001$).

Razprava in zaključek: V skrb za starejše osebe je potrebno vključiti prepoznavanje njihovega samospoštovanja, da se lahko s pravočasnimi aktivnostmi prepreči zmanjšanje ravni njihove kakovosti življenja, kar zahteva ustrezno usposabljanje zdravstvenih delavcev, družin in družbe.

Ključne besede: starejše osebe, samospoštovanje, kakovost življenja, stanovanje, fizična aktivnost

Self-esteem and quality of life between residents living in homes for the elderly and those living in their own home

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Introduction: So far, many researches on self-esteem and quality of life have been more often conducted among the younger population. The aim of this cross-sectional study was to investigate perception of self-esteem and quality of life of the older people, as well as to examine differences regarding self-esteem and quality of life between those who live at their own homes and in care homes.

Methods: The study was based on a quantitative methodology. There were 204 respondents included into the study at the age of 65 years and more, with preserved cognitive abilities in the area of city Osijek. One hundred and one respondents (49.5%) live at their own house or flat, and 103 of them (50.5%) have accommodation in the care home. A questionnaire was used to carry out a survey. It contained socio-demographic data, data on the activities of the surveyors, their self-esteem assessment according to Rosenberg Scale of Self-esteem (RSES), assessment of quality of life according to the Life Satisfaction Scale (SWLS) and assessment of functional abilities.

Results: There were 41 (20.1%) men and 163 (79.9%) women surveyed, who assessed their self-esteem within the normal borders, they were satisfied with their life and had good functional abilities. Respondents in both groups expressed equal satisfaction with life (Mann-Whitney U test, $p=0,846$). Respondents who live in their own house or flat have higher self-esteem than those who live in care home (RSES score mean difference 3.4; 95% CI for the difference from 1.0 to 5.8; t-test for independent samples, $p=0.005$). Respondents with higher self-esteem are more satisfied with their life (Spearman's $p=0.537$, $p<0.001$).

Discussion and conclusions: Therefore, self-esteem has to be included and recognised into care for the older adults, so that decrease of their quality of life could be timely prevented, for what is required adequate training of health staff, families and society.

Keywords: elderly, self-esteem, quality of life, housing, physical activity

Kaj napoveduje prilagajanje na staranje med lezbicnimi, gejevskimi in biseksualnimi starejšimi odraslimi?

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Uvod: Intervencijski programi, ki razlagajo napovednike prilagajanja na staranje (adjustment to aging AtA) za manjšino starejših lezbijk, gejev in biseksualcev (lesbian, gay and bisexual LGB), so redki. Namen te preliminarne študije je izdelati strukturni model, s katerim bi raziskali, ali socio-demografske, zdravstvene in z življenjskim slogom povezane spremenljivke, korelirajo s prilagajanjem na staranje v skupini starejših odraslih lezbijk, gejev in biseksualcev.

Metode: V vzorec je bilo vključenih 287 starejših odraslih LGB, starih 75 let in več. Na priložnostnem vzorcu smo zbirali podatke s pomočjo vprašalnika. Merski instrument je vključeval lestvico prilagajanja na staranje (AtA), lestvico zadovoljstva z življenjem, demografske značilnosti in značilnosti, povezane z življenjskim slogom in zdravjem. Za razlago strukturnega modela samoocene prilagajanja na staranje (AtA) smo uporabili strukturno modeliranje.

Rezultati: Strukturni model je pokazal naslednje pomembne korelate prilagajanja na staranje (AtA): zaznano zdravje ($\beta = 0,456$; $p < 0,001$), prosti čas ($\beta = 0,378$; $p < 0,001$), dohodek ($\beta = 0,302$; $p < 0,001$) = 0,289; $p = 0,009$), duhovnost ($\beta = 0,189$; $p < 0,001$), spol ($\beta = 0,156$; $p < 0,001$), telesna aktivnost ($\beta = 0,142$; $p < 0,001$) zadovoljstvo z življenjem ($\beta = 0,126$; $p < 0,001$) in zakonski stan ($\beta = 0,114$; $p = 0,008$). Spremenljivke pojasnjujejo 76,4 % variabilnosti spremenljivke prilagajanja na staranje (AtA).

Razprava in zaključek: Rezultati nakazujejo, da je pri oblikovanju politike in intervencij v skupnosti z LGB starejšimi odraslimi, koristno upoštevati proučevane spremenljivke, kot so zaznano zdravje, prosti čas in dohodek. Te spremenljivke so se pokazale kot pomemben dejavnik spodbujanja prilagajanja na staranje v pozni odrasli dobi v proučevanih skupini.

Ključne besede: prilagajanje na staranje, korelati, lezbični, gejevski in biseksualni starejši odrasli, strukturno modeliranje

What Predicts Adjustment to Aging among Lesbian, Gay and Bisexual Older Adults?

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Introduction: Intervention programs that highlight predictors of adjustment to aging (AtA) for minority older lesbian, gay and bisexual (LGB) populations are scarce. The aim of this preliminary study is to build a structural model to explore whether socio-demographic, health and lifestyle-related variables, are correlates of AtA in a group of LGB older adults.

Methods: The sample comprised 287 LGB older adults aged 75 years old and older. Convenience sampling was used to gather questionnaire data. Measures encompassed the Adjustment to Aging Scale, the Satisfaction with Life Scale, demographics and lifestyle and health-related characteristics. Structural equation modeling was used to explore a structural model of the self-reported AtA, comprising all the above variables.

Results: The structural model indicated the following significant correlates: perceived health ($\beta = 0.456$; $p < 0.001$), leisure ($\beta = 0.378$; $p < 0.001$), income ($\beta = 0.302$; $p < 0.001$), education ($\beta = 0.299$; $p = 0.009$), spirituality ($\beta = 0.189$; $p < 0.001$), sex ($\beta = 0.156$; $p < 0.001$), physical activity ($\beta = 0.142$; $p < 0.001$), satisfaction with life ($\beta = 0.126$; $p < 0.001$), and marital status ($\beta = 0.114$; $p = 0.008$). The variables explain respectively 76.4% of the variability of AtA.

Discussion and conclusions: These outcomes suggest that policy making and community interventions with LGB older adults may benefit of including variables, such as, perceived health, leisure and income, as these were pointed out as significant for this group of older adults for promoting adjustment to aging in late adulthood.

Keywords: adjustment to aging, correlates, lesbian, gay and bisexual older adults, structural equation modeling

Medgeneracijski dialog – pot k boljšemu stiku med generacijami

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Dobra komunikacija in razumevanje med različnimi generacijami je ena izmed najpomembnejših tem moderne družbe. Medgeneracijski dialog je pot k boljšemu stiku oziroma odnosu med generacijami. Medgeneracijski prenos definiramo kot prenos vzorcev vedenja in različnih prepričanj iz starejše generacije na mlajšo. Z izrazom medgeneracijski dialog oziroma odnosi opisujemo širok razpon vzorcev interakcij med posamezniki različnih generacij družine, med starejšo generacijo in mlajšo generacijo. Prenašajo se različna prepričanja, norme, vrednote, stališča in vedenja, značilna za družino, ali pa se odražajo sociokulturne, verske in etnično ustrezne prakse in prepričanja neke družbe. Vedenjski vzorci medosebnih interakcij so lahko tudi neprimerni ali celo škodljivi, kot na primer nasilje v družini, zloraba drog in alkohola. Namen prispevka je opozoriti na pomen intervencij, s katerimi bi lahko družinske člane ozavestili in informirali o pomembnosti dobrih in zdravih družinskih odnosov, da bi opustili različne družbeno nezaželene, nesprejemljive in škodljive vzorce medosebnih družinskih interakcij ter jih zamenjali z ustreznimi. Ugotovili smo, da so različne intervencije pomemben dejavnik pri spremembi načina vedenja družinskih članov, pri katerih bi želeli spremeniti globoko ukoreninjene vzorce in načine vedenja, čustvovanja in mišljenja, ki se prenašajo iz generacije v generacijo.

Ključne besede: medgeneracijski dialog, medgeneracijski prenosi, vedenjski vzorci, intervencije, družinski odnosi

Intergenerational dialogue - a way to improve the contact between generations

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Good communication and understanding between different generations is one of the most important issues of modern society. Intergenerational dialogue is a way to improve the contact between different age groups, in order to achieve understanding and solidarity between generations. Intergenerational transmission is defined as the behaviour or tendencies of one generation passing onto the next generation. The term intergenerational dialog or relation describes a wide range of patterns of interaction among individuals of different generations of a family among those in older and those in younger generations. What is transmitted may include beliefs, norms, values, attitudes, and behaviours specific to that family, or may reflect sociocultural, religious, and ethnically relevant practices and beliefs of society. Behavioural patterns of interpersonal interactions may also be inadequate or even harmful, such as domestic violence, drug and alcohol abuse. The purpose of the article is to draw attention to the importance of interventions, to show what an important factor they are to achieve the awareness and information about the importance of a good family relationship, their abandonment of old habits and adoption of the new ways of behaviour. We have found out that interventions are an important factor for changing behaviour of family members from which it is required to change deeply rooted beliefs and patterns of behaviour that are transmitted from generation to generation.

Keywords: intergenerational dialogue, intergenerational transmission, behaviour patterns, interventions, family relationships

Pozitivno staranje: problem mladih generacij ali izziv sodobne družbe

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Uvod: Upokojitev je pomemben življenjski dogodek, ki predstavlja prehod v novo življenjsko obdobje in prinaša nove spremembe. Te se kažejo v telesnih spremembah ter v spremembah na psihološki in socialni ravni. Posameznik se naenkrat sooča s strahom pred prihodnostjo, z iskanjem nove vloge v družbi in z negotovostjo, ki jo starost prinaša.

Metode: Uporabljena je bila deskriptivna metoda dela s pregledom relevantne slovenske in tuje znanstvene ter strokovne literature s področja psihologije staranja. Obdelava podatkov je bila izvedena z uporabo metaanalize podatkov. Iskanje literature je potekalo po slovenskih knjižnicah preko sistema Cobiss in po različnih bazah podatkov (ScienceDirect, Wiley Online Library, MEDLINE, CINAHL, Cochrane, PubMed). Uporabili smo literaturo v obdobju od 2007 do 2017.

Rezultati: Mnoge študije kažejo, da je proces priprave na staranje ključnega pomena za pozitivno staranje. Predvsem izpostavljajo ohranjanje aktivnosti na fizičnem, psihičnem in socialnem nivoju, saj le tako zmoremo ohraniti pozitivno samopodobo v družbi. Prav tako sta pomembna pokazatelja pozitivnega staranja sposobnost posameznikove časovne predstave in ohranjanje občutka povezanosti z družbo.

Razprava in zaključek: Pozitivno staranje je odvisno od okolja, v katerem oseba živi in deluje. Pri tem so v pomoč različni mehanizmi, kot so sposobnost miselnega in vedenjskega prilagajanja, ohranjanje pozitivne samopodobe ter pozitiven pogled na staranje.

Ključne besede: pozitivno staranje, starostniki, upokojitev, pogledi na staranje, psihološka prilagoditev

Positive ageing: the problem of young generation or challenge for modern society

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Introduction: Retirement is an important life event, which brings new life changes. This reflects on physical, psychological and social levels. The individual is suddenly facing a fear for the future, he is trying to find new roles in society and has a lot of insecurities that ageing can bring.

Methods: A systematic literature search of the published literature was conducted at Slovenian libraries with Cobiss. We also used some databases (ScienceDirect, Wiley Online Library, MEDLINE, CINAHL, Cochrane, PubMed), where we were searching within ageing psychology field. We used descriptive method with literature review to make meta-analysis. The review was restricted to studies published since 2007 to 2017.

Results: Many studies suggest the process of preparation for ageing is very important for positive ageing. It is important to stay active on all three (physical, psychological and social) levels, because this is the only way to maintain a positive self-image in society. There are equally important factors of positive ageing: the ability of individual's time perspective and maintaining a sense of cohesion with society.

Discussion and conclusions: Positive ageing depends on the environment in which the person lives and works. Different mechanisms, such as the ability of the thought and behavioural adjustment, maintaining a positive sense of self and positive view on ageing are very helpful.

Keywords: positive ageing, older adults, retirement, views on ageing, psychological adjustment

Kulturna participacija in zdravje slovenske mladine, odraslih in starostnikov

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Uvod: Participacija na področju kulture predstavlja pomemben del družbenega in psihosocialnega okolja in lahko pozitivno prispeva k zdravju in dobremu počutju, vendar v zadnjih letih v Evropi zaznavamo upad nekaterih oblik kulturne participacije. Pogostost kulturne participacije (obisk muzejev, baletnih/plesnih/opernih predstav, obisk kina, koncertov ipd.) se spreminja tudi s starostjo. Prav tako se lahko v različnih obdobjih posameznikovega življenja razlikuje prispevek različnih dimenzij kulturne participacije k boljšemu zdravju. Glavni namen pričujoče raziskave je preučiti in primerjati učinek dimenzij kulturne participacije na subjektivne zdravstvene izide med različnimi starostnimi skupinami, in sicer med mladimi (16–34 let), odraslimi (35–64 let) in starostniki (65 let in več).

Metode: Izvedli smo multivariatno sekundarno analizo na nacionalnem reprezentativnem vzorcu slovenskih odraslih (16 in več let) v okviru anketnih podatkov raziskave EU-SILC 2015. Rezultati: Ugotovili smo, da 1) je celokupna kulturna participacija pri vseh treh starostnih skupinah pozitivno povezana z boljšim zdravjem; 2) da je pozitiven učinek kulturne participacije najmočnejši med starostniki; 3) da posameznikova starost pogojuje učinek posameznih dimenzij kulturne participacije na zdravje.

Razprava in zaključek: Ciljne strategije spodbujanja kulturne participacije bi lahko pomembno prispevale k izboljšanju zdravja prebivalcev Slovenije.

Ključne besede: kulturna participacija, neenakosti v zdravju, kulturni kapital, mladi, starostniki.

Cultural participation and health of Slovenian youth, adults and the elderly

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Introduction: Cultural participation is an important element of social environment that may have a positive impact on health and well-being, yet some cultural activities have been declining in recent years in Europe. Additionally, cultural activities (visiting museums, going to ballet/dance/opera performances, going to the cinema, music concerts) tend to vary during the life cycle. Finally, health-related impact of various dimensions of cultural participation may differ at various stages of life. The main aim of our research was to examine and compare the impact of dimensions of cultural participation on subjective health outcomes among three age groups in Slovenia: young people (16-34-year olds), adults (35-64-year-olds) and the elderly (65+).

Methods: We performed multivariate analyses on cross-sectional EU-SILC 2015 survey data, a nationally-representative sample of Slovenian adults (16+ year-olds).

Results: We found 1) that combined cultural participation was associated with better health among all three age groups; 2) that participation's impact was the largest among the elderly; and 3) that age moderated the impact of dimensions of cultural participation on health. **Discussion and conclusions:** Targeted strategies encouraging cultural participation might contribute to improved health among the Slovenian public.

Keywords: cultural participation, health inequalities, cultural capital, youth, elderly.

Vpliv telesne dejavnosti na kognitivne sposobnosti starejših ljudi

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Uvod: Redna telesna dejavnost je pomemben faktor pri ohranjanju in izboljševanju zdravja, ter preprečevanju nastanka bolezni. Ima dokazane pozitivne učinke na zdravje in počutje ljudi v vseh starostnih obdobjih.

Metode: Uporabljena je bila deskriptivna metoda dela s pregledom slovenske in tuje znanstvene in strokovne literature. Obdelava podatkov je bila izvedena z uporabo metaanalize podatkov. Iskanje literature je potekalo po slovenskih knjižnicah preko sistema Cobiss in po različnih bazah podatkov (ScienceDirect, Wiley Online Library, MEDLINE, CINAHL, Cochrane, PubMed). Uporabili smo 12 člankov iz obdobja med leti 2007 do 2017.

Rezultati: Avtorji različnih raziskav navajajo mnoge pozitivne učinke telesne vadbe pri starejših ljudeh na ohranjanje mišične mase in s tem zmanjšanje števila padcev, ugodno vpliva na srčno-žilni sistem, zdravljenje diabetesa, hipertenzije, debelosti, hiperholesterolemije. Pomembno vpliva na duševno zdravje, saj preprečuje nastanek nekaterih duševnih bolezni (npr. depresija, demenca).

Razprava in zaključek: Ugotovljeno je bilo, da redna telesna dejavnost izboljšuje spomin in pomembno vpliva na kognitivne funkcije starejših, se pa redne telesne dejavnosti starejši udeležujejo v manjši meri. Kaže se potreba po raziskovanju pozitivnih vplivov redne telesne dejavnosti pri starejši populaciji.

Ključne besede: telesna dejavnost, starejši ljudje, kognitivne funkcije, ozaveščanje

The impact of physical activity on cognitive functions of elderly people

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Introduction: It is unquestionable that physical activity has positive effects on health. Large body of evidence has shown that physical activity helps to reduce illness and improves psychical state at all age groups.

Methods: A systematic literature search of the published literature was conducted at Slovenian libraries with Cobiss, we also used some databases (ScienceDirect, Wiley Online Library, MEDLINE, CINAHL, Cochrane, PubMed). We used descriptive method with literature review to make meta-analysis. The review was restricted to studies published since 2007 to 2017.

Results: Physical activity positively influences body muscular structure, cardiovascular risk factors, diabetes, hypertension, obesity and dyslipidaemia. Activity also reduces the incidence of osteoporosis and improves function of immune system and blood circulation in brains, mental function is better. Indeed, physical activity helps to improve mental health and prevent depression, dementia.

Discussion and conclusions: In conclusion, these results highlight the important role of physical activity in the protection of mental functions of elderly. But the geriatric population is less likely to be regularly active. As the number of elderly persons in our community increase, more attention is being given to physical activity at elderly.

Keywords: Physical activity, elderly, cognitive functions, empowering

Dejavniki trajanja hospitalizacije v neakutni obravnavi

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Uvod: S staranjem prebivalstva so potrebe po neakutni bolnišnični oskrbi vedno večje. Neakutna obravnava je namenjena predvsem starejšemu prebivalstvu, ki ne potrebuje več diagnostičnih postopkov, temveč predvsem izboljšanje samooskrbe. Zdravstvena nega je ena izmed prioritet neakutne obravnave. Namen raziskave je bil ugotoviti vzroke, ki vplivajo na trajanje hospitalizacije v neakutni obravnavi.

Metode: Na podlagi podatkov Negovalnega oddelka smo izvedli retrospektivno presečno raziskavo. Zbrali smo podatke o 431 pacientih in postavili pet hipotez: ugotavljali smo, ali je trajanje hospitalizacije povezano z demografskimi značilnostmi pacienta, z oceno potreb po zdravstveni negi, s številom negovalnih diagnoz, z vključevanjem svojcev in z vrsto medicinske diagnoze.

Rezultati: Izsledki analize kažejo, da je bila hospitalizacija daljša pri pacientih, ki so bili mlajši od 65 let ($p=0,02$), z večjim številom odpustnih negovalnih diagnoz ($p=0,044$), s slabšo vključenostjo svojcev ($p=0,024$), pri pacientih z zlomom kolka ali z možganskim infarktom ($p<0,001$).

Razprava in zaključek: S to raziskavo smo potrdili, da zdravstvena nega zelo pripomore k napredku in boljši kakovosti življenja pacientov.

Ključne besede: trajanje hospitalizacije, starostnik, neakutna obravnava

Factors influencing hospital length of stay in non-acute care setting

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Introduction: With the aging of the population, the need for non-acute hospital care is increasing. Inaccessible treatment is aimed primarily at the elderly population, who no longer needs diagnostic procedures, but rather the improvement of self-care. Health care is one of the priorities of non-acute treatment. The purpose of the study was to determine what influence the duration of hospitalization in non-acute care.

Methods: Based on the data from the Care Department, a retrospective cross-sectional study was carried. We collected data on 431 patients. We determined whether the duration of hospitalization is related to the demographic characteristics of the patient, the assessment of the needs for nursing care, the number of nursing diagnoses, the involvement of relatives and the type of medical diagnosis.

Results: The results of the analysis show that hospitalization was longer in patients who were under 65 years of age with a higher number of fetal nursing diagnoses ($p=0.044$), with poorer involvement of relatives ($p=0.024$), in patients with hip fractures or with a brain infarction ($p<0.001$).

Discussion and conclusions: With this research, we confirmed that health care greatly contributes to the progress and better quality of life of patients.

Keywords: hospital length of stay, elderly, non-acute treatment

Volja do smisla, depresija in telesno-gibalna aktivnost pri starostnikih

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Uvod: Staranje samo prinaša spremembe v fizičnih in mentalnih sposobnostih ter psihosocialnih dejavnikih. Depresija pri starejših pomembno prispeva k nižji kakovosti življenja in povišani umrljivosti. Pomanjkanje volje do smisla je povezano z depresijo in izgubo volje do življenja. Telesna dejavnost je lahko varovalni dejavnik pri preprečevanju ali blaženju depresije in njenih posledic.

Metode: Uporabljena je bila kvantitativna metoda. V raziskavi je sodelovalo 29 starostnikov (10 moških in 19 žensk, povprečna starost 84,53 (SD=6,59)), oskrbovancev centra starejših občanov. Uporabili smo vprašalnike za odkrivanje bivanjske praznine, prisotnosti simptomov depresije ter o drugih demografskih podatkih.

Rezultati: Med telesno aktivnimi in neaktivnimi starostniki ni statistično pomembnih razlik in povezav v doživljanju smisla ter depresivno simptomatiko. Pri obeh skupinah je izredno nizko povprečje testa PIL (88,31; SD=19,28) ter visoko povprečje testa CES-D (17,96; SD=6,12).

Razprava in zaključek: Telesna aktivnost med oskrbovanci doma za starejše ni varovalni dejavnik pred simptomi depresije in bivanjsko praznino. Med starostniki vlada globoka bivanjska praznina in visoka prisotnost depresivne simptomatike ne glede na telesno aktivnost. Rezultati kažejo na nujnost uvedbe določenih psihosocialnih ukrepov v centru starejših.

Ključne besede: starostniki, telesna aktivnost, depresija, volja do smisla

The meaning in life and depression in physical active and inactive older adults

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Introduction: Process of aging derives changes in physical, mental competences and in psychosocial factors. The quality of life in depressive older adults is much lower and they are more prone to mortality. Low meaning in life correlates with depression and loss of will to live. Physical activity can be protective factor against depressive symptoms.

Methods: A quantitative method was used. In the survey participated 29 participants, (10 men and 19 women, $M=84,53$; $SD=6,59$ years old), of which all were members of olds people home. We have used questionnaires' for meaning in life and depressive symptoms and demographic questionnaire. The differences between physical active and inactive elders in depression symptoms and in meaning in life will be tested.

Results: There was no statistically significant difference between groups in meaning of life and depressive symptoms. Both groups have low mean score in PIL test ($88,31$; $SD=19,28$) and high score in CES-D test ($17,96$; $SD=6,12$).

Discussion and conclusions: Physical activity is not a protective factor in elder people against depressive symptoms and existential vacuum. Between groups, there is a difference in deep existential vacuum, and high symptoms of depression. It is necessary to introduce some psychosocial interventions in olds people house.

Keywords: Elderly people, physical activity, depression, meaning in life

Psihomotorna upočasnjena pri bolnikih s starostno depresijo

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Uvod: Starostna depresija se lahko razlikuje od zgodaj potekajoče depresije: pacienti imajo lahko več pritožb nad telesnimi obolenji, mnogi so psihomotorno upočasnjeni; starostna depresija ima lahko kroničen potek s pogostimi poslabšanji ter je združena z motnjami spoznavnih sposobnosti. Po antidepresivnem zdravljenju je lahko opazno izboljšanje spoznavnih sposobnosti, so prisotne pa ostanejo tudi po učinkovitem zdravljenju depresije. Opredelitev psihomotornih znakov pri depresiji ima velik kliničen in terapevtski pomen.

Metode: V študijo je bilo vključenih dvajset bolnikov s starostno depresijo po dosegu remisije. Rezultate perfuzijske scintigrafije možganov smo primerjali med podskupinama preiskovancev z različno psihomotorno upočasnjeno: skupino z nižjim odzivnim časom ter skupino z višjim odzivnim časom.

Rezultati: Psihomotorno počasnejša skupina bolnikov s starostno depresijo je v primerjavi s hitrejšo, imela nižjo perfuzijo v čelnem režnju, limbičnem režnju in malih možganih ter višjo perfuzijo in aktivnost v predcentralnem področju ter asociacijskih predelih temenskega in zatilnega režnja.

Razprava in zaključek: Bolniki z geriatrično depresijo so lahko tudi v remisiji psihomotorno upočasnjeni. Bolniki z večjo psihomotorno upočasnjeno odražajo nižjo perfuzijo v globokih možganskih strukturah ter povečano perfuzijo višjih kortikalnih področjih možganov, kar lahko odslkava različne procese obvladovanja okvar spoznavnih sposobnosti.

Ključne besede: starostna depresija, psihomotorna upočasnjena, perfuzijska scintigrafija

Psychomotor retardation in geriatric depression

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Introduction: Geriatric depression differs from early onset depression: patients have more somatic complaints, they score worse on cognitive, particularly frontal tests, and many of them present with psychomotor slowness. Depression in late life, more often than not, follows a relapsing or chronic course. The cognitive response to antidepressant treatment is variable, and impairments persist even after effective treatment of depression. Psychomotor impairment is one of the main characteristics of the late onset depression.

Methods: Twenty patients with late onset depression were included in the study after they had reached remission. The aim of this study was to compare perfusion SPECT between two groups of patients with psychomotor slowing: a group of patients with lower reaction time (RT) and group with higher RT.

Results: The group of patients with longer RTs showed significant hyperperfusion of precentral gyrus, parietal regions, cuneus and hypoperfusion within insular, frontal, temporal, limbic cortices, as well as cerebellum.

Discussion and conclusions: Patients with geriatric depression in early remission may differ on the degree of psychomotor retardation measured as RT. Those with greater psychomotor retardation measured exhibited hypoperfusion in deep brain structure and significant hyperperfusion of higher cortical structure when compared to those with lower psychomotor retardation measured, possibly reflecting different strategies to cope with cognitive impairment.

Keywords: geriatric depression, psychomotor retardation, perfusion SPECT

Kontinuiteta v življenju članov iste družine iz različnih generacij

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Uvod: Vidiki življenja posameznika so neposredno povezani z vidiki drugega posameznika še posebej v krogu družine. Namen naše raziskave je bil vpogled v vidike življenja posameznika ter potrditi, da življenje enega člana družine vpliva na drugega člana družine od najmlajše do najstarejše generacije.

Metode: V raziskavi je bila uporabljena kvalitativna metoda raziskovanja – študija primera. V vzorec smo vključil šest oseb, tri ženske, ki pripadajo eni družini in tri moške, ki pripadajo eni družini, vendar so pripadniki različnih generacij. Podatki so bili pridobljeni s pol strukturiranim intervjujem in kodirani s petimi koraki.

Rezultati: Rezultati intervjujev kažejo tipično povezanost življenj očeta/mame in sina/hčerke, pri čemer pa je povezanost z dedkom/babico oz. tastom/mamo nekoliko manjša. Med intervjuji so izpostavljene teme kot so izraba časa, uspeh, dobri in slabi ljudje ter nek kontinuum oz. teorija kontinuitete v življenjih intervjuvancev, ki je še posebej izpostavljena pri najstarejši generaciji.

Razprava in zaključek: Ljudje smo družbena bitja, ki so med seboj povezana in potrebujemo drug drugega, vplivamo drug na drugega ter smo si med seboj podobni. Raziskava treh generacij je pokazala vplivanje člana ene generacije na drugega, pa tudi povezovanje članov ene družine ter podobno razmišljanje istih generacij. Med člani ene družine iz različnih generacij je več podobnosti, kot raznolikosti, dogodki, ki se zgodijo enemu pa vplivajo na življenje drugega.

Ključne besede: povezana življenja, tri generacije, teorija kontinuitete, vidiki življenja, pozitivizem

Continuity in lives of the members of the same family, from different generations

Blaž Razvornik

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Introduction: The aspects of an individual's life are directly related to the aspects of another individual, especially in the family circle. The purpose of our research was to inspect individual aspects of life and to confirm that the life of one family member affects another member of the family from the youngest to the oldest generation.

Methods: A qualitative method of research was used in the study – case study. In the study we included six people, three women and three man. The data were obtained with a semi-structured interview. The analysis of the interviews was divided into five steps.

Results: The results of the interviews show a typical connection between the lives of the father/mother and the son/daughter, while the connection with the grandfather/grandmother and father in law/mother is slightly smaller. The interviews exposed topics such as time use, success, good and bad people and theory of continuity in the lives of interviewees, which is particularly exposed by the oldest generation.

Discussion and conclusions: People are social beings that are interconnected and need each other, we influence one another and we are similar. The research of three generations has shown the influence of a member of one generation on the other, as well as the connections of members of one family and similar thinking of the same generations. Among members of one family of different generations, there are more similarities than diversity, and events that happen to one affect the life of another.

Keywords: connected lives, three generations, the theory of continuity, aspects of life, positivism

Stališča študentov zdravstvene nege do spolnosti v tretjem življenjskem obdobju

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Uvod: Staranje je proces, ki vodi postopoma v izgubljanje funkcij organiza. Med sposobnostmi, ki s starostjo pešajo oziroma se spreminjajo, je tudi spolnost, ta pa je pomembna v vseh obdobjih posameznikovega življenja. Na stališča do spolnosti med starejšimi odraslimi velikokrat vplivajo religija, družinski odnosi in izobrazba. Namen raziskave je bil proučiti stališča študentov zdravstvene nege glede spolnosti med starejšimi in kolikšen vpliv imata pri tem religija in družina.

Metode: V raziskavi je bila uporabljena kvantitativna metoda dela, za zbiranje podatkov pa je bila uporabljena tehnika anketiranja. V raziskavi je sodelovalo 58 študentov 3. letnika zdravstvene nege, v starosti 21 do 40 let. Z bivariantno analizo smo ugotavljali razlike v stališčih glede veroizpovedi anketirancev, ki smo jo merili s pomočjo analize variance – ANOVA.

Rezultati: Rezultati so pokazali, da ima religija vpliv na stališča anketirancev. Da je spolnost ena od osnovnih človeških aktivnosti, se najbolj strinjajo študenti, ki se opisujejo kot ateisti (PV=3,0), kot kristjani (PV=2,8) in islamisti (PV=2,3). Da so starejši še vedno sposobni imeti spolne odnose, so se najbolj strinjali ateisti (PV=3,0), sledilo je mnenje kristjanov (PV=2,6), najmanj pa anketiranci islamske vere (PV=2,0). Ravno tako smo ugotovili, da imajo na razmišljanja študentov o temi spolnost v starostnem obdobju vpliv tudi družinski odnosi. Razprava in zaključek: Rezultati kažejo, da ima religija vpliv na stališča študentov do spolnosti med starejšimi odraslimi. Spolnost bi morala postati tema, ki se ji zdravstveno osebje in družba ne bi izogibala.

Ključne besede: študenti zdravstvene nege, medicinske sestre, spolnost, starejši ljudje, staranje

Attitudes of students about sexuality in the third age

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Introduction: Aging is a process that leads gradually to the loss of functions of an organism. Among the abilities that change with aging is also sexuality, which is important in all periods of the individual's life. Sexuality among older adults is often influenced by religion, family relations and education. The purpose of the research was to study the views of nursing students on sexuality among the elderly and the extent to which religion and family have an influence. **Methods:** A quantitative working method was used in the study, and a survey technique was used to collect data. The study included 58 students of the 3rd year of nursing care, aged 21 to 40 years. By bivariant analysis, we found differences in attitudes regarding religious beliefs of respondents, which we measured with the analysis of variance - ANOVA.

Results: The results showed that religion has an impact on the views of the respondents. Students that are described as atheists (PV = 3.0), as Christians (PV = 2.8) and Islamists (PV = 2.3), most agree that sex is one of the basic human activities. Older people are still able to have sex, the atheists most strongly agreed (PV = 3.0), followed by the opinion of Christians (PV = 2.6), and least of all respondents of the Islamic faith (PV = 2.0). We also found that family relationships have a influence on students' thinking about the topic of sexuality in old age. **Discussion and conclusion:** The results show that religion has an impact on students' attitudes towards sexuality among older adults. Sexuality should become a topic that should not be avoided by healthcare personnel and society.

Keywords: nursing students, nurses, sexuality, elderly people, aging

Medgeneracijski programi kot rešitev socialne izoliranosti starostnikov

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Uvod: Osamljenost in socialna izolacija postajata zaskrbljujoči težavi znotraj institucionaliziranega varstva starostnikov v domovih za starejše in predstavljata veliko oviro pri duševnem in fizičnem zdravju starostnika. Pri reševanju te težave se na trgu pojavljajo roboti v obliki živali, ki starostnikom polepšajo vsakdan, a avtorji verjamejo, da obstaja bolj empatična rešitev na nivoju medgeneracijskega druženja predšolskih otrok s starostniki, saj se v tujini takšne rešitve že poslužujejo.

Metode: Opravili smo sistematični pregled slovenske in tuje znanstvene ter strokovne literature z deskriptivno metodo dela s področja razširjenosti medgeneracijskih programov za otroke in starostnike ter pozitivne in negativne lastnosti le-teh. Obdelava podatkov je bila izvedena z uporabo metaanalize podatkov od leta 2007 do 2017 in je vključevala 10 člankov s tega področja.

Rezultati: Tako kot pri ostalih ljudeh se tudi pri starostnikih kaže potreba po aktivnem življenju, socializaciji in vključevanju v družbo. S pregledom literature smo utemeljili koristi medgeneracijskega sodelovanja, osvetlili smo težave starostnikov, predstavili primere dobro organiziranih medgeneracijskih druženj po svetu in utemeljili pomembnost socializacije starejših.

Razprava in zaključek: Rešitev problema socialne izoliranosti in osamljenosti starostnikov znotraj institucionaliziranega varstva je nujna, saj populacija starostnikov po vsem svetu narašča in nas s tem sooča s široko paleto izzivov.

Ključne besede: medgeneracijski program, aktivno staranje, predšolski otroci, domovi za starejše, socialna izolacija

Intergenerational programs as a solution to the social isolation of the elderly

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Introduction: Loneliness and social isolation are becoming a serious problem within the institutionalized care of elderly people in nursing homes and they are major obstacle to the mental and physical health of the elderly. On the market we can find robot animals for solving this problem, but we believe that there is a more empathic solution at the level of intergenerational program. This solution is practice in foreign countries.

Methods: We will undertake a systematic overview of Slovenian and foreign scientific and professional literature with a descriptive method of work in the field of the distribution of intergenerational programs for children and the elderly, as well as the positive and negative properties of these. We used descriptive method with literature review to make meta-analysis. The review was restricted to studies published since 2007 to 2017 and included 10 articles.

Results: As with other people, the need for active life, socialization and social inclusion is also evident in the life of elderly. By reviewing the literature we justified the benefit of intergenerational cooperation, highlighted the problems of the elderly, presented examples of well organized intergenerational associations around the world and justified the importance of socializing older people.

Discussion and conclusions: The solution of mentioned problem within institutionalized care is necessary since the population of the elderly around the world is growing and is facing us with a wide array of challenges.

Keywords: intergenerational program, active aging, pre-school children, nursing homes, social isolation of older people

**Sekcija/Section
Starostnik – okolje
Elderly – environment**

Vabljeno predavanje Invited lecture

Prilagoditev v bivalnem okolju starejšim

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Uvod: Bivalno okolje je eden od dejavnikov, ki lahko prispevajo k zdravemu, predvsem pa k varnemu staranju na domu, če je le to urejeno in prilagojeno potrebam, ki jih imajo starejši odrasli. V nasprotnem primeru lahko neprilagojeno bivalno okolje povzroča stres, slabo počutje in izgubo samostojnosti, poleg tega pa je lahko tudi vzrok za poškodbe.

Metode: Cilj raziskave je bil ugotoviti: ali so ljudje zadovoljni s funkcionalnostjo v domačem okolju in ali se v svojih domovih počutijo varne ter ali nezadovoljstvo narašča s starostjo uporabnikov. Želeli smo ugotoviti probleme s katerimi se pri v svojih domovih srečujejo starejši ljudje in opredeliti kriterije za oblikovanje notranje opreme prilagojene starejšim ljudem z varnostnega vidika. Kot raziskovalni inštrument smo uporabili anketni vprašalnik, in sicer pri ljudeh starejših od 55 let. Sodelovalo je 210 ljudi.

Rezultati: Pomanjkljivosti vključujejo nezadostno razsvetlavo (32 %), nepripravno zaporedno sestavo delovnih površin (56 %), vzdrževanje higiene (68 %), neustrezno oblikovano pohištvo (72 %) in naloge, ki postanejo težje zaradi upada mentalnih sposobnosti (75 %).

Razprava in zaključek: Rezultati raziskave kažejo na to, da se ljudje ne zavedajo, da bi lahko z ustrežnejšo opremo opravljali vsakdanja opravila hitreje, z manj napora in bolj varno.

Ključne besede: pohištvo, ergonomija, notranja oprema, starejši, okolje

Adaptability in living space for elderly people

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Introduction: Living environment is one of the factors that can contribute to healthy and safe ageing at home, providing that it is well adapted to the needs of older adults. On the contrary, it can cause stress, discomfort and lead to injuries, resulting in the loss of independence and autonomy.

Methods: The aim of research was to determine; whether people are generally content with the functionalities that their homes, and if the degree of negative feedback increases with the ages of the users. We tended to pinpoint any major problems facing elderly people whilst living in their homes, and to establish a criteria for interior design that could be tailored with senior users in mind, particularly within the ambit of safety. A survey questionnaire was used as a research instrument among people older than 55 years. 210 people participated.

Results: Common shortcomings include insufficient lighting (32 %), inappropriate sequential composition of work surfaces (56%), ease of hygiene maintenance (68 %), inappropriately shaped furniture (72 %), and tasks that become troublesome because of declining memory (75%).

Discussion and conclusion: The results show that most users do not realize that they could, with more appropriate interior design, perform daily tasks faster, safer, and with less effort.

Keywords: furniture, ergonomics, interior design , elderly, environment

Oskrba kronične rane pri starostniku v domačem okolju

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Uvod: Oskrba s kronične rane pri starostniku je v domačem okolju svojevrstna, saj so doma drugačne razmere kot v bolnišnici in ambulantni. Velikokrat je starostnik odvisen od pomoči patronažne medicinske sestre in družinskih članov oz. njegovih bližnjih. V današnjem času se pojavljajo številne ovire, na katere pogosto naletijo starostniki pri oskrbi kronične rane.

Metode: Raziskava je temeljila na kvantitativni metodologiji raziskovanja. Izvedli smo presečno raziskavo z deskriptivno metodo dela in metodo anketiranja. Instrument raziskave je bil anketni vprašalnik, ki je vseboval 27 vprašanj. Uporabili smo priložnostni vzorec 50 starostnikov s kroničnimi ranami.

Rezultati: Najbolj pogosta kronična rana pri starostnikih je bila golenska razjeda v 64 %. Starostniki s kronično rano so velikokrat odvisni od drugih, zato jim mora obvezilni material nekdo priskrbeti. Večino anketirancem (75 %) je obvezilni material priskrbela patronažna medicinska sestra. Ugotavljamo, da vsi anketirani ne uporabljajo sodobnih oblog. Od 50 anketiranih jih 20 % le-teh ne uporablja.

Razprava in zaključek: Kronične rane predstavljajo problem, s katerim se soočajo predvsem starostniki, saj je celjenje rane dolgotrajno in vpliva na kakovost življenja. Starejši pacienti potrebujejo veliko spodbude in informacij glede oskrbe rane, da bodo na koncu zainteresirani za samostojno oskrbo rane oz. da bodo oskrbo rane zaupali tudi svojcem in pomembnim drugim.

Ključne besede: kronična rana, starostnik, domače okolje, patronažna medicinska sestra

The treatment of chronic wound among elderly at home

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Introduction: Chronic wound care among elderly at home is specific approach because of differences between hospital and home environmental situations. Elderly at home are often dependent of home visitors' or family members' help. Nowadays there are many barriers that elderly persons confront in the process of chronic wound care.

Methods: The research based on quantitative research methodology. The cross-sectional study was conducted. Opportunity sampling was used. Sample included 50 elderly with chronic wound. The data collection was conducted using validated questionnaire, which contained 27 questions.

Results: The most common (64 %) chronic wound among elderly was shank ulcer. Elderly are often dependent on others to provide the all needed care material. Most (75 %) of the participants get care material from their home visitor. Findings show that the participants do not use new coverings. Of 50 participants 20 % of them do not use new coverings.

Discussion and conclusions: Facing with chronic wounds is the main problem among elderly because the wound healing is a process that lasts long and has an impact of quality of life. Elderly often need more support and information about wound care that may interested them in taking better care and trust family members in helping them.

Keywords: chronic wound, elderly, home, home visitor

Kakovost spanja pri starejši populaciji: sistematični pregled literature

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Uvod: Staranje je opredeljeno kot fiziološki proces, ki se začne ob rojstvu in traja vse do zadnjih dni življenja. Je neizogiben proces, ki zajema zdravstvene, socialne, kulturne in ekonomske dimenzije našega življenja. Proces staranja ima vpliv na kakovost spanja pri posamezniku. Statistični podatki kažejo, da ima več kot 70 % starostnikov težave s spanjem.

Metode: Izvedli smo sistematični pregled literature na tematiko kakovost spanja pri starejših. Literaturo smo iskali s pomočjo podatkovnih baz: PubMed, Web of Science in CINAHL s pomočjo ključnih besed: sleep, elderly, quality, nursing in Boolovim operatorjem (AND, OR). Kriterij za iskanje člankov so bili znanstveni in strokovni članki v angleškem jeziku, objavljeni od 1. januarja 2000 do 10. april 2018.

Rezultati: Od 6056 zadetkov smo v končno analizo vključili 10 člankov, ki so izpolnjevali vključitvene in izključitvene kriterije. Na podlagi tematske analize smo identificirali tri glavne kategorije: farmakološki ukrepi, telesna aktivnost in kognitivna terapija.

Razprava in zaključek: Starostniki z motnjami spanja imajo težave s koncentracijo, spominom in opravljanjem dnevnih opravil, s tem pa se večja nevarnost za krhkost in socialno izolacijo. Nadalje motnje spanja vplivajo na pojavnost depresije in anksioznosti. Poznavanje vplivov motenega spanca na kakovost življenja starostnika je zelo pomembno, saj naspan starostnik preživi dan bolj kakovostno ima pozitiven vpliv na ljudi v svoji bližini in posledično na življenje.

Ključne besede: spanje, starostnik, kakovost, medicinska sestra

Quality of sleep among elderly: a systematic review

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Introduction: Aging is defined as the physiologic process that begins at birth and lasts until the last days of life. It is an inevitable process that covering a health, social, cultural and economic dimensions of our lives. The aging process has an impact on the quality and duration of sleep among elderly. Statistics show that more than 70% of the elderly have more trouble sleeping than others.

Methods: A systematic review of literature of Quality of sleep among elderly has been done. Searched databases included PubMed, Web of Science and CINAHL with keywords: sleep, elderly, quality with Boolean operators (AND, OR). The inclusion criteria were scientific and professional articles published from 1 January 2000 to 10 April 2018 in English language.

Results: Of the initial 6056 identified hits, 10 articles were included in the detailed analysis and these matched the assimilation criteria. Through the synthesis we formulated three major categories: pharmacological interventions, physical activity and cognitive therapy.

Discussion and conclusions: Elderly with sleep disorders have difficulty in concentrating, remembering, and performing daily activity, that increasing the risk of fragility and social isolation. Knowing the effects of sleep problems on the quality of life of the elderly is very important, because the elderly with good night's sleep spent the day more qualitatively, has a positive impact on people in their vicinity and consequently on their life.

Keywords: elderly, sleep, quality, nurse

Nasilje nad starostniki

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Uvod: Starostniki sodijo med bolj ogrožene in ranljive skupine prebivalstva. Nasilje nad njimi je v naši družbi pogost pojav. Prisotno je tako doma, kot tudi v domovih starejših ter bolnišnicah. Splošno mnenje je, da je starostnik v domačem okolju varen, starost v domovih starejših pa brezskrbna. Vendar starostnike najpogosteje ogrožajo prav njegovi svojci in bližnji. Nad njimi izvajajo več vrst nasilja. Namen članka je predstaviti problematiko nasilja nad starejšimi.

Metode: Uporabljena je bila deskriptivna metoda raziskovalnega dela. Izvedli smo pregled znanstvene literature v slovenskem in angleškem jeziku. Članki so bili kritično pregledani, ugotovitve pa predstavljene. Obdelava podatkov je bila izvedena z uporabo metaanalize. Uporabili smo literaturo v obdobju od 2007 do 2017.

Rezultati: Ugotovili smo, da se nad starostniki pogosto izvaja nasilje. Glede na to kje živijo, doma ali domu starejših, so oblike nasilja drugačne. Nasilje nad njimi izvajajo tako svojci kot tudi zdravstveni delavci. Odraža se na različne načine in v različnih oblikah. Žrtve se navadno ne obranijo in ne poiščejo pomoči.

Razprava in zaključek: Ugotavljamo, da je nasilje nad starostniki prisotno in da je potrebno poznavati problematiko nasilja nad starostniki, saj le tako lahko ukrepamo in jim pomagamo. Pomembno je zgodnje odkrivanje in prepoznavanje žrtev nasilja. Potrebno je ozaveščanje zdravstvenih delavcev o oblikah nasilja in o pomoči, ki jo lahko starostniku nudijo

Ključne besede: starostnik, starost, nasilje, žrtev

The abuse of elderly people

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Introduction: Elderly people are one of the most vulnerable and endangered population groups. They are frequently targeted by violence and/or abuse. This occurs at home, in hospitals, and in nursing homes. The general opinion is that they are safe at home or they carelessly live in a nursing home. Nevertheless they are most frequently threatened by relatives and people closest to them. The goal of this article is to present the issue of violence against the elderly.

Methods: We used a descriptive research method with a critical review of Slovenian and English professional and scientific literature. All articles and literature were critically read, evaluated and presented. We used the meta-analysis of the data. The review was restricted to studies published between 2007 and 2017.

Results: The violence against elderly people is common and differs whether it is observed at home or in a nursing home. The victims usually do not defend themselves and do not seek help. The results also show, that the violence is not only carried out by relatives and people closest to them but by healthcare staff as well.

Discussion and conclusions: The abuse against elderly people is present and in order to act properly in this regards we need the proper skills and knowledge. Early abuse detection is crucial, however, awareness about it should be raised amongst the healthcare staff who have the important role.

Keywords: elderly people, age, abuse/violence, victim

Okolje in starostnik z gluhoto in naglušnostjo

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Uvod: Starostniki so skupina ljudi, še zlasti gluhi ali naglušni, ki potrebujejo posebno skrb in pomoč. Pogosto so v oskrbi v socialnovarstvenem zavodu, kjer se morajo zaposleni usposobiti za delo s takšno osebo. Poleg osebe se mora prilagoditi gluhi in naglušni osebi tudi okolje, prav tako se mora gluhi ali naglušni starostnik seznaniti s pastmi življenja v tišini.

Metode: V raziskavi smo uporabili vprašalnik, ki smo ga razdelili 240 anketirancem. Zanimalo nas je mnenje zaposlenih diplomiranih medicinskih sester in dijakov Srednje zdravstvene šole Celje glede odnosa okolja do starostnika z gluhoto in naglušnostjo.

Rezultati: Opaziti je razliko med odnosom do gluhih in naglušnih nekoč in danes, zlasti na področju vključevanja v družbeno okolje. Večjih odstopanj v mnenjih anketiranih ni opaziti.

Razprava in zaključek: Težave s sluhom pri takšni osebi se kažejo pri razumevanju povedanega in slišane ter medsebojnih odnosih v okolju. Pri njih gre za deficit na področju čutil, torej sluha. V raziskavi smo raziskali življenje gluhih in naglušnih ljudi v socialnovarstvenem zavodu. Na naše zadovoljstvo sta gluhoti in naglušnosti v sodobnem času bolj razumljena, okolje pa je gluhim in naglušnim bolj prizanesljivo.

Ključne besede: starostnik, gluhoti, naglušnost, okolje

Environment and the elderly with deafness and hard of hearing

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Introduction: Elderly people are a group of people, especially the deaf or hard of hearing, who needs special care and help. Often, they are in care in a social care institution, where employees have to be trained to work with such a person. Besides staff, to the deaf and a hard of hearing person has to adapt the environment, as well as the deaf or hard of hearing elderly must become acquainted with the traps of life in silence.

Methods: In the survey was used a questionnaire, which was distributed to 240 respondents. We were interested in the opinion of the employed graduated nurses and students of the Secondary School of Nursing Celje, regarding the attitude of the environment to the elderly with deafness and hard of hearing.

Results: It is worth noting the difference between the attitude towards the deaf and the hard of hearing in the past and today, especially in the field of social integration. Other major deviations in the opinions of the respondents are not observed.

Discussion and conclusions: Hearing problems with such a person are reflected in the understanding of what has been said and heard their interaction in the environment. They have a deficit in the sense of the senses, that is hearing. In the survey, we studied the lives of deaf and hard of hearing people in the social care institution. To our satisfaction the deafness and hard of hearing nowadays are better understood, and the environment is more lenient to the deaf and the hard of hearing.

Keywords: elderly, deafness, hard of hearing, environment

Biomehanska in ergonomska analiza pomoči pacientu pri vstajanju

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Uvod: Diplomirane medicinske sestre, zdravstveni tehniki in negovalci so poklici, ki veliko delajo tudi s starostniki. Slednji potrebujejo več pomoči zaradi zmanjšanja moči in šibkosti. Zgoraj omenjeni strokovnjaki so v samem vrhu poklicev z največjo pojavnostjo mišično-skeletnih težav, ki so pogosto posledica ročnega dvigovanja in premeščanja. Zato je potrebno izvesti analizo biomehanike in telesne mehanike za vpeljavo ergonomskih intervencij in ne nazadnje spremeniti pristope, ki se osredotočajo na zmanjšanje ročnega dvigovanja in premeščanja ter, če je le mogoče, slednje odpraviti. Potrebno je kritično preučiti tradicionalni način izobraževanja o "pravilnem dviganju" v zdravstvu.

Metode: Uporabljen je bil preprost biomehanski model z namenom preučitve dveh različnih pristopov k intervenciji - pomoč pri vstajanju iz sedečega položaja - da bi ugotovili, kateri je najvarnejši in bolj ergonomično učinkovit pristop za zdravstvene delavce.

Rezultati: Na podlagi ugotovitev je najbolj ergonomsko učinkovit in najvarnejši pristop tisti, ki se izvaja iz bočne strani pacienta, pri predpogoju zadostne moči pacienta.

Razprava in zaključek: Izpostavili smo dva pomembna dejavnika, ki preprečujeta mišično-skeletna obolenja, kot so pravilno učenje intervencij in krepitev moči starostnikov v sodelovanju s fizioterapevtom.

Ključne besede: ročno premeščanje in dviganje, ergonomija, biomehanika, mehanika telesa, zdravstvena nega

Biomechanical and ergonomical analysis of assisting patients in standing up

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Introduction: Nurses, nursing assistants and caregivers are professionals working also with elderly population. Elderly population needs more help because of decreasing strength and weakness. Consequently are above mentioned professionals at the very top of the professions with the most work-related musculoskeletal disorders, commonly caused by manual handling and lifting. There is a need to address biomechanics and body mechanics, to implement ergonomic intervention, and ultimately to change policies so that they focus on minimizing manual handling and lifting, and eliminating it where possible. Consequently it is necessary to critically examine the evidence regarding intervening in the traditional education of “proper lifting” in healthcare.

Methods: A simple biomechanical model has been developed to examine two different approaches to a single nursing intervention—assisting from sitting to standing—in order to determine which is the safest and more ergonomically efficient for health professions.

Results: Based on the findings, the most ergonomically efficient and safest approach is performing the task from the side of the patient, at the pre-requisite of the patient's sufficient strength. **Discussion and conclusions:** We have highlighted two important factors preventing musculoskeletal disorders like correct learning of interventions and strengthening of the elderly population in cooperation with physiotherapists.

Keywords: manual handling and lifting, ergonomics, biomechanics, body mechanics, nursing

Strategije za uspešno življenje v domačem okolju pri starejših invalidih

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Uvod: Razviti svet se zaveda trendov staranja prebivalstva: Ob tem se zaveda tudi potreb starejših oseb s posebnimi potrebami, v našem primeru starejših invalidov z živčno-mišičnimi obolenji, po kvalitetnem življenju v domačem okolju. Slednje je možno, vendar potrebujemo ustrezne podporne sisteme in jasno začrtano strategijo.

Metode: Empirična raziskava je bila izvedena po kvalitativni metodi dela, s pomočjo pol strukturiranega intervjuja s tremi težkimi invalidnimi osebami, obolenimi z živčno-mišičnimi obolenji. Intervjuji so bili izvedeni decembra 2015. Zbrani podatki so bili analizirani s kvalitativno vsebinsko analizo. Na podlagi teh podatkov je bila izdelana SPIN analiza in na osnovi nje strategije.

Rezultati: Iz intervjujev je bilo jasno razbrati, kako živijo starejši bolniki z živčno-mišičnimi obolenji, kaj potrebujejo, kaj pogrešajo, česa se bojijo, česa se veselijo in ostale informacije, potrebne za SPIN analizo in iz nje izvedene štiri sklope strategij.

Razprava in zaključek: Raziskava je pokazala, kam usmeriti delovanje za omogočanje življenja v domačem okolju pri starejših invalidih z živčno-mišičnimi obolenji. Na podlagi analize pa je bil izdelan tudi Model percepcije starejših invalidov z živčno-mišičnimi obolenji v odnosu na okolje. Z modrimi odločitvami in dobrimi strategijami bodo neizogibne spremembe v prihodnosti obvladljive.

Ključne besede: starejše osebe, invalidi, živčno-mišična obolenja, domače okolje, strategija

Strategies for successful life in the home environment for older disabled people

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Introduction: Modern world is aware of the trends of aging population; it is also aware of the needs of elderly people with special needs, in our case elderly disabled people with neuromuscular disorders, to live a quality life in their home environment. The latter is possible, but we need the appropriate support systems and a clearly defined strategy.

Methods: The empirical study was carried out according to a qualitative method of work, with the help of a semi-structured interview with three elderly severely disabled people with neuromuscular disorders. The interviews were carried out in December 2017. The collected data were analysed with a qualitative content analysis. Based on these data, the SPIN analysis was made, through which the strategy was elaborated.

Results: It was clear from the interviews how elderly patients with neuromuscular disorders live, what they need, what they miss, what they are afraid of, what they are looking forward to and the other information needed for SPIN analysis and for the four components of the strategy derived from the analysis.

Discussion and conclusions: The study showed where to direct actions to enable elderly disabled people with neuromuscular disorders living in their home environment. Based on the analysis a Model for the perception of elderly disabled people with neuromuscular disorders in relation to the environment was developed. With wise decisions and good strategies unavoidable changes in the future will be manageable.

Keywords: elderly people, people with disabilities, neuromuscular diseases, home environment, strategy

Sekcija/Section
Starostnikom prilagojene IKT rešitve
in storitve
ICT solutions and services tailored
for the elderly

Vabljeni predavanje Invited lecture

Kako narediti telemedicinske storitve dostopne kroničnim bolnikom v podporo samozdravljenju v domačem okolju?

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Uvod: Ob povečanih potrebah po dolgotrajni oskrbi postajajo telemedicinske (TM) storitve pomemben del sodobnih sistemov zdravstvenega varstva. Raziškovalci so že dokazali, da imajo te storitve ogromen potencial za vzdrževanje/izboljšanje zdravja kroničnih bolnikov. Cilj pričujoče študije je bil preveriti njihovo klinično učinkovitost na skupini pacientov.

Metode: Preverjanje je potekalo v Splošni bolnišnici Slovenj Gradec, kjer je 550 pacientov s srčnim popuščanjem in/ali sladkorno boleznijo uporabljalo storitve TM že od leta 2014. Storitve so bile vzpostavljene in evalvirane v okviru EU projekta UNITED4HEALTH.

Rezultati: Rezultati so pokazali, da je mogoče z uporabo TM izrazito zmanjšati število hospitalizacij in njihovo trajanje. Tako pacienti kot zdravniki so te storitve dobro sprejeli (zadovoljstvo 4,3/5).

Razprava in zaključek: Kljub dokazanim pozitivnim učinkom, Slovenija zapravlja priložnost, da hitro zagotovi TM podporo omenjenim pacientom. Namesto, da bi podprli uvajanje storitve, vlagamo denar v ponovno inoviranje. Storitve so sedaj na voljo tudi drugim zdravstvenim organizacijam v Sloveniji. Kljub obsežni promociji v strokovnih krogih, se še nobena od njih ni odločila za uporabo. Razlogi za nesprijemanje so predvsem v slovenskem zdravstvenem in zavarovalniškem sistemu ter odnosu do inoviranja.

Ključne besede: telemedicinske storitve, telemedicina na domu, kronične bolezni, srčno popuščanje, sladkorna bolezen tipa 2

How to make home telemedicine services available to patients with chronic conditions to support their self-management at home?

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Introduction: With increased demands in long-term care, home telemedicine (TM) services are becoming an important part of modern healthcare systems. Researchers have already proven that these services have enormous potentials in maintaining/improving health conditions of patients with chronic diseases. The goal of the study was to assess the clinical effectiveness of TM services on a group of patients.

Methods: The assessment was performed in General hospital Slovenj Gradec, Slovenia, where 550 patients with heart failure and diabetes used the TM services since 2014. The services were set-up and evaluated within the UNITED-4HEALTH EU project.

Results: Results showed that the use of TM services can significantly reduce the number and duration of hospitalisations. Both patients and doctors accepted these services (level of satisfaction 4.3/5).

Discussion and conclusions: Despite the demonstrated positive effects, Slovenia is missing the opportunity to provide TM services to these patients. Instead of supporting the implementation of these services, the financial resources are invested in re-innovation. TM services are currently available also to other health care institutions in Slovenia. No health institution decided to implement these services, despite the fact that extensive promotion was performed with healthcare professionals. The reason for non-acceptance are mainly in the Slovenian health and insurance systems and the non-supportive attitude towards innovations.

Keywords: telemedicine service, home telemedicine, long-term conditions, heart failure, diabetes type 2

Priporočila za aplikacijske piktograme za starostnike

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Uvod: Pri načrtovanju aplikacij za osebne, prenosne računalnike, računalniške tablice in pametne telefone in ostale informacijsko komunikacijske tehnologije, prilagojene starostnikom, je potrebno upoštevati določena priporočila. Cilj pričujoče študije je identificirati omenjena priporočila, ki se nanašajo na razvoj piktogramov. Slednji olajšajo starostnikom uporabo aplikacij s pomočjo slikovnih ponazoritev fizičnih objektov.

Metode: Da bi dosegli omenjeni cilj, smo izvedli sistematični pregled literature, kjer smo pregledali različne specializirane zbirke podatkov (npr. ScienceDirect, EBSCO) kot tudi ostale relevantne spletne strani na tem področju.

Rezultati: Identificiranih je bilo 12 priporočil, razdeljenih v dve skupini: (1) priporočila glede uporabe barv in (2) priporočila glede uporabljenih oblik.

Razprava in zaključek: Identificirana priporočila bi lahko v bodoče predstavljala razvijalcem omenjenih aplikacij ustrezen referenčni vir. Da bi dodatno preverili ustreznost omenjenih priporočil, je potrebno opraviti še dodatna testiranja na končnih uporabnikih. Slednja bi potrdila, ali identificirana priporočila tudi dejansko povečajo razumljivost piktogramov.

Ključne besede: starostnik, aplikacije, piktogram, informacijsko komunikacijske tehnologije

Recommendations on application pictograms for the elderly population

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Introduction: When designing applications for personal computer, laptops, tablets and smartphones, and other information and communication technologies, tailored to the needs of elderly population, special recommendation should be considered. The goal of this study is to identify these recommendations by focusing on design of pictograms. These facilitate the use of applications by elderly population by using pictorial resemblances of physical objects.

Methods: To fulfil the aforementioned goal a systematic literature review was performed, where different specialised databases (eg. ScienceDirect, EBSCO, etc.) were consulted as well as other relevant web pages in this field.

Results: In total, 12 recommendations were identified, grouped into two core groups: (1) colour recommendations and (2) shape recommendations.

Discussion and conclusions: In future, the identified recommendations could represent a valid reference for the developers of applications. To confirm the validity of the identified recommendations, further tests should be performed on the final users. These tests would confirm, whether the developed recommendations actually improve the pictograms' comprehensibility.

Keywords: elderly population, applications, pictogram, information and communication technologies

Prednosti in slabosti telemedicine pri oskrbi v domačem okolju

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Uvod: Starajoča družba, pojav novih bolezni, dolge čakalne vrste in ozaveščenost posameznikov prinaša razvoj tehnologije tudi na področje oskrbe.

Metode: Predstavljen prispevek izhaja iz zgodovinske metode raziskovanja, deskriptivno-analitične metode, metode izvajanja sklepov ter induktivne in deduktivne metode.

Rezultati: Med prednosti telemedicine uvrščamo dostop do oskrbe, enakost, preprečevanje stigmatizacije, osredotočenost posameznika na lastne potrebe in želje, večjo vključenost izvajalcev zdravstvenih storitev ter hitrejšo pridobitev podatkov, ki so pomembni za izboljšanje zdravstvenih storitev. Pomanjkljivosti telemedicine so pomanjkanje finančnih vzpodbud, pomanjkanje podpore zainteresiranih skupin, pomanjkanje motivacije in sposobnosti uporabe tehnologije, pomanjkanje standardizacije.

Razprava in zaključek: Razvoj tehnologije na področju oskrbe v domačem okolju v ospredje postavlja posameznika in njegove potrebe. Zaradi drastičnih sprememb v razmišljanju o oskrbi, je mogoče pričakovati pospešen razvoj telemedicine, kjer bodo v ospredje prihajale predvsem njene prednosti. Poudariti pa je potrebno, da telemedicina ni nadomestilo za zdravstveno oskrbo, ampak le nujno potrebno orodje, ki krepi in izboljšuje izvajanje oskrbe.

Ključne besede: telemedicina, oskrba, domače okolje

Benefits and barriers of telemedicine in home care

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Introduction: Aging society, the emergence of new diseases, long queues and awareness of individuals emphasize technology development in the field of care.

Methods: This study is based on historical method, a descriptive-analytical method, a method of joint implementation and an inductive and deductive method of research.

Results: Benefits of telemedicine are access to care, equity, patient-centeredness, quality of care, prevention of stigmatization, the ability to change the way healthcare is delivered by stimulating all involved stakeholders to critically think about how they deliver or receive care. Barriers of telemedicine are lack of financial incentives, lack of stakeholder support, lack of motivation and ability to use technology, lack of legal basis, lack of standardization.

Discussion and conclusions: The development of technology in home care puts the individual and his needs at the forefront. Telemedicine is going to develop and advance with fast pace and its benefits will increase exponentially as the current mind set about caring is also changing drastically. What we must accept is that telemedicine is not a replacement for health service, but merely a series of tools that can enhance and improve the health care delivery.

Key words: telemedicine, care, home environment

Naslavljanje starostne krhkosti s pomočjo informacijsko-komunikacijske tehnologije

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Uvod: Starostna krhkost je zelo razširjena med starejšimi osebami; prevalenca starostne krhkosti se giblje med 5 % in več kot 45 %, odvisno od opredelitve in starostne skupine. Poleg oslabiljenosti, odvisnosti od drugih in ene ali več kroničnih bolezni je tako skoraj neizogibna posledica demografskih sprememb v družbi. K soočanju z demografskim staranjem populacije lahko pomembno prispevajo tudi starostnikom prilagojene rešitve in storitve, podprte z informacijsko-komunikacijskimi tehnologijami (IKT).

Metode: Med marcem in junijem 2017 je bil izveden pregled literature (uporaba PRISMA protokola), ki raziskuje in opisuje obvladovanje krhkosti s pomočjo IKT.

Rezultati: Število vseh iskalnih rezultatov je bilo 124634, v analizo je bilo vključenih 33 člankov.

Razprava in zaključek: Aplikacija in uporaba IKT pri krhkih osebah ima več razsežnosti in igra pomembno vlogo pri obvladovanju tega stanja, predvsem z vidika telesne dejavnosti in vadbe ter zaznave gibanja oziroma preprečevanja padcev ter tudi prehrane, spanja, splošne blaginje, kognitivnih funkcij, socialne interakcije, komunikacije, psihološkega stanja in podpore ostalim vsakodnevnim aktivnostim krhkih starejših oseb. Kljub temu pa ostaja odprtih več vprašanj in izzivov.

Ključne besede: informacijsko-komunikacijske tehnologije, IKT, staranje, krhkost, obvladovanje krhkosti

Tackling frailty with the help of information-communication technology

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Introduction: Frailty seems to be highly prevalent among the elderly, while its prevalence is estimated to be between 5 % and more than 45 % depending on definition and age group. Beside impairment, dependence on others, and one or more chronic diseases, it appears to be almost inevitable consequence of demographic changes in the society. Solutions and services adapted to the elderly and supported by the information-communication technology (ICT) seem to significantly contribute to facing population's demographic ageing.

Methods: The literature review, which researches and describes management of frailty with the help of ICT, was carried out (use of PRISMA protocol) between March and June 2017

Results: Number of all research results was 124634, while 33 articles were included in the analysis.

Discussion and conclusions: Application and use of ICT among frail persons is multidimensional and plays an important role within management of frailty. Especially in the sense of physical activity and exercise, and motion detection or falls prevention, as well as nutrition, sleep, overall well-being, cognitive functions, social interaction, communication, psychological state, and support to other daily activities of frail elderly. However, several questions and challenges remain unanswered.

Keywords: information-communication technology, ICT, ageing, frailty, frailty management

Sekcija/Section

**Telesna (ne)aktivnost in njen pomen
za zdravje starostnikov**

**Physical (in)activity and its importance
for healthy ageing**

Vabljeno predavanje Invited lecture

(Ne)odvisnost jakosti in posturalne stabilnosti pri starostnikih

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Uvod: Slabo ravnotežje in šibkost sta med pogostimi razlogi za padec pri starejših (Rogers in Mille, 2003). Gibalna aktivnost dokazano izboljša stoječe ravnotežje (Hauer et al., 2006), medtem ko popolna neaktivnost povzroči nasproten učinek. Namen te študije je bil preučiti povezavo med mišično jakostjo in ravnotežjem pri starejših.

Metode: Izvedli smo tri študije na starejših osebah: 1) prečno presečno študijo odnosa jakost-ravnotežje; 2) študijo učinkov 14-dnevnega neprekinjenega ležanja; 3) študijo učinkov vadbe moči in električne stimulacije na ravnotežje. Ravnotežje je bilo merjeno na ploščah za merjenje sil, med različnimi položaji in nalogami. Jakost je bila merjena v izometričnih pogoji.

Rezultati: *Študija 1:* Ugotovili smo nizke povezanosti med jakostjo in hitrostjo, amplitudo ter frekvenco premikanja CoP (vsi $R^2 < 0,22$). *Študija 2:* Po obdobju ležanja so bile okrnjene tako mere jakosti kot ravnotežja, a so se po 14-dnevnom treningu večinoma povrnila v izhodiščno stanje. *Študija 3:* Parametri ravnotežja so se razlikovali med skupinami. Vadba moči je privedla do opaznejšega izboljšanja napram električni stimulaciji.

Razprava in zaključek: Rezultati naših študij nakazujejo da je odnos med jakostjo in ravnotežjem vse prej kot preprost, pri čemer se zdi, da spremembe v jakosti ob povečani/zmanjšani aktivnosti sovpadajo s spremembami v ravnotežju.

(In)dependence of Strength and Postural Stability in Elderly

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Introduction: Poor balance and decline in strength are considered as reasons for falls in elderly (Rogers and Mille, 2003). Physical exercise has been shown to improve balance in an upright posture (Hauer et al., 2006), while bed rest results in opposite effects. Our aim was to investigate the interplay between strength and balance in elderly

Methods: We conducted three separate studies on elderly subjects: 1) cross-sectional study to investigate strength-balance relationship; 2) 14-day bed rest study and 3) a study investigating the effects of strength training and electrical stimulation on balance. Body balance was assessed using force plates and involved different stances and tasks. Strength was evaluated in isometric conditions.

Results: Study 1: Low correlation coefficients between strength and body sway velocity, amplitude and frequency (all $R^2 < 0.22$) were found. Study 2: Strength and body balance measures were deteriorated after BR, but mostly returned to baseline after 14-day reconditioning. Study 3: Balance parameters were statistically significant between groups. The improvements were higher in the leg press than in the electrical stimulation group.

Discussion and Conclusion: The results of our studies indicated no straightforward relationship between strength and. Activity/inactivity changes in strength seem to go hand in hand with the changes in improved/impaired balance.

Promocija aktivnosti starejših z namenom podaljševanja samostojnega bivanja – program aktivnega staranja Soseska za samostojno življenje

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Demografski podatki številnih držav po svetu kažejo na pospešeno rast deleža starejše populacije. Hkrati raste zavedanje o pomenu aktivnega staranja in zagotavljanja samostojnega življenja v lastnem domu namesto zgodnjega sprejetja v bivalno oskrbo. Bivanje v soseski za samostojno življenje se v zadnjem času omenja kot dober korak za zmanjševanja popolne bivalne oskrbe. Takšna praksa bivanja starejših je bila zasnovana na Malti v letu 2015, z ustanovitvijo Soseske za samostojno življenje Hilltop Gardens, zgrajeno s strani zasebnega podjetnika z področja turizma. Ustanovljena soseska je ponudila aktivno preživljanje časa in bivanje starostnikom. V tem prispevku so predstavljene in izpostavljene nekatere izkušnje, pridobljene tekom upravljanje te organizacije z vidika:

- i) Zagotavljanja optimalne kakovosti storitev in oskrbe za uporabnike.
- ii) Ustvarjanja okolja, ki spodbuja aktivno staranje.
- iii) Zadostne podpore neformalni skrbnikom glede storitev in uporabnikov.
- iv) Ponudbe primernih vsebin za spodbujanje aktivnosti in socializacije starejših.

Z vidika razvoja podobnih lokalnih in globalnih iniciativ so izpostavljeni izzivi ter priložnosti za nadaljnje delo na tem področju. V nadaljevanju so opisane implikacije aktivnega življenja starejših skozi socialne, fizične in psihološke aktivnosti ter učinki, ki so bili opaženi pri uporabnikih Soseske.

Delaying admission to residential care through keeping elderly residents active for longer- providing active ageing through a Retirement Village

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The demographics of many countries across the globe are witnessing the rapid growth of the respective elderly population. Coupled with this, there is a widening recognition of the importance of active ageing, keeping individuals living, as long as possible in one's own home, whilst aging in place, as opposed to admission in residential care. Assisted living through sheltered accommodation offers, potentially one favourable avenue towards achieving this. Assisted living for the elderly was introduced in Malta in 2015, through Hilltop Gardens Retirement Village, built by a private entrepreneur whose main expertise is the hospitality industry. This retirement village however offered a lifestyle as well as accommodation to the elderly choosing to reside there. This paper seeks to present and reflect on managements' experience regarding:

- (i) Securing optimal quality of care delivery to service users/ clients,
- (ii) Providing the right environment which is conducive to active ageing
- (iii) Adequate assistance to informal carers around the service user/ client.
- (iv) Providing the right activities for elderly residents to remain active and socialise.

The challenges and opportunities arising from such experience are discussed in view of contributing to the development of future same initiatives, locally, and also in the international context. The implications of keeping the elderly active through socialisation, physical and psychological activities are discussed and the impact it has had on the elderly living in the Village.

Vloga telesne aktivnosti in prehrane pri preprečevanju krhkosti

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Uvod: Ker se lahko proces, ki vodi h krhkosti in odvisnosti od drugih upočasnji ali popolnoma zavre je primeren za zgodnje intervencije. Zgodnje intervencije lahko najdemo na več področjih, še posebej na področju prehrane in fizične aktivnosti.

Metode: Za to raziskavo je bil izveden sistematični pregled literature in dobrih praks za dve področji delovnega paketa 6 – management krhkosti na ravni posameznika projekta ADVANTAGE: prehrana in telesna aktivnost.

Rezultati: Podhranjenost ali nevernost podhranjenosti povečujeta tveganje za razvoj krhkosti in njenih posledic. Mini prehrabena ocena je validirano orodje za prepoznavanje podhranjenosti in tveganja podhranjenosti. Fizična aktivnost in vadba starejših krhkih oseb je učinkovita in relativno varna ter lahko odpravlja krhkost. Zdrava prehrana in telesna aktivnost v kombinaciji dajeta najboljše rezultate.

Razprava in zaključek: Krhki pacienti z povečanim tveganjem za zlome potrebujejo dodaten vnos D vitamina. Mediteranska dieta je povezana z nizkim tveganjem za razvoj krhkosti. Zagotovitev dodatnega vnosa, vsaj 1 – 1.2 g beljakovin na kg telesne teže je koristno. Vadbene intervencije pri starejših krhkih osebah lahko povečajo telesno moč, imajo potencial ohranjanja ali celo povečanja telesne mase brez maščob in so učinkovite za izboljšanje aerobne kapacitete ter ravnotežja. Posledično se zmanjša možnost padcev in poveča kakovost življenja.

Ključne besede: krhkost, prehrana, telesna aktivnost

Role of physical activity and nutrition in prevention of frailty

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Introduction: As the process, which leads to frailty and disability, can be slowed down or even completely reversed, it can be appropriate for early interventions. Early interventions can be found in multiple fields, especially in physical activity and nutrition.

Methods: Systematic literature review and good practices review was conducted to obtain the results on two tasks of the Work package 6 – the Management of Frailty at Individual Level JA ADVANTAGE: Nutrition, Physical activity.

Results: Malnutrition or being at risk for malnutrition increases the risk of frailty and its consequences. With regard to the importance to recognize malnutrition and risk of malnutrition, the Mini Nutritional Assessment is a well validated tool to be used for screening and assessment. Physical activity and exercise in frail elderly are effective and relatively safe and may reverse frailty. Both, health nutrition and physical activity give best results when they are combined.

Discussion and conclusions: Frail patients who are at elevated risk for falls and fracture need Vitamin D supplementation. The Mediterranean diet is associated with lower risk of frailty. Assuring a protein intake of at least 1-1.2 g per kilogram of body weight per day is beneficial.

Exercise interventions in frail elderly persons can increase strength and power, have potential to maintain or even slightly increase fat-free mass, and are effective in improving aerobic capacity and balance. Consequently, fall incidence is reduced and quality of life improved.

Keywords: frailty, nutrition, physical activity

Vpliv telesne neaktivnosti na vnetne dejavnike

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Uvod: Študije na populaciji mlajših in starejših oseb potrjujejo protivnetne učinke telesne aktivnosti. Popolna telesna neaktivnost vpliva na vnetne in protivnetne dejavnike na različen način pri starejših in mlajših preiskovancih.

Metode: Popolna telesna neaktivnost je bila uporabljena kot model v obeh skupinah zdravih moških preiskovancev: 7 mladih (starih 18-30 let) in 16 starejših odraslih (starih 55- 65 let). Primerjali smo učinke popolne neaktivnosti na vnetje. Ključni mediatorji vnetja: faktor tumorske nekroze α (TNF- α), interleukin-6 (IL-6), visfatin, rezistin in protivnetni adiponektin so bili izmerjeni pred in po daljši neaktivnosti.

Rezultati: Mladi so se odzvali na neaktivnost s povečanjem serumskega visfatina in rezistina, medtem ko so se starejši odrasli odzvali s povečanjem vrednosti IL-6 in TNF- α . Poleg tega se je protivnetni adiponektin povečal pri vseh udeležencih. Korelacijska analiza je pokazala pozitivno povezavo med serumskim visfatinom in IL-6 v obeh skupinah, medtem ko je serumski adiponektin negativno povezan s TNF- α pri mladih in pozitivno povezan z rezistinom pri starejših odraslih.

Razprava in zaključek: Popolna telesna neaktivnost negativno vpliva na markerje vnetja in pojav vnetja nizke stopnje v obeh skupinah, toda vnetje je bilo bolj izrazito pri starejših odraslih. To podpira zamisel, da se morajo starejše osebe izogibati tudi krajšim obdobjem telesne neaktivnosti.

Ključne besede: telesna neaktivnost, vnetje, adipokini, starejše osebe

Effects of physical inactivity on inflammation

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Introduction: Studies in elderly and young people generally support anti-inflammatory effects of physical activity and moderate exercise. We hypothesized that complete physical inactivity could affect the pro- and anti-inflammatory markers differently in elderly and young participants.

Methods: Complete physical inactivity has been used as a model in both groups of healthy male volunteers: 7 young (aged 18–30) and 16 older adults (aged 55–65). The effects of inactivity on inflammation were compared. Key low-grade inflammation mediators, tumour necrosis factor α (TNF- α), interleukin-6 (IL-6), visfatin, resistin, and anti-inflammatory adiponectin were measured before and after prolong inactivity.

Results: Young responded to inactivity by increasing serum visfatin and resistin while older adults responded by increasing IL-6 and TNF- α . In addition, serum adiponectin increased in all participants. Correlation analysis demonstrated positive association between serum visfatin and IL-6 in both groups, while serum adiponectin was negatively associated with TNF- α in young and positively associated with resistin in the older adults.

Discussion and conclusions: Short-term complete physical inactivity negatively affected markers of low-grade inflammation in both groups, but the inflammation was more pronounced in older adults. This supports the notion that elderly people should avoid even short periods of physical inactivity.

Keywords: physical inactivity, inflammation, adipokines, elderly

Vpliv sedečega delovnika na funkcije trupa – kontekst starejših zaposlenih

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Staranje (delovno aktivne) populacije predstavlja številne izzive, ki večinoma izhajajo iz pomanjkanja zdravja. Namen študije je bil ugotoviti, ali se starejši in mlajši zaposleni razlikujejo v izbranih senzorično-motoričnih funkcijah trupa ter ali izpostavljenost delovniku na njih vpliva različno. Petdeset (30 mlajših ($30,5 \pm 3,3$ let) in 20 starejših ($55,0 \pm 3,8$ let)) zdravih preiskovancev je opravilo meritve pred in po polnem delovniku. Spremljali smo gibljivost ledvenega dela trupa, kinestezijo trupa, največjo hoteno jakost mišic trupa v smeri iztega, vzdržljivost trupa v smeri iztega ter posturalne odzive mišic trupa na pričakovano in nepričakovano motnjo. Izvedli smo 2-smerno ANOVA (skupina (2) x čas (2)), za ugotavljanje razlik v izhodiščnih vrednostih (pred delovnikom) pa t-test. Rezultati izhodiščnih meritev so pokazali nižjo jakost trupa ter krajše latence odzivov mišic obliquus externus in internus abdominis na pričakovano motnjo pri skupini starejših zaposlenih. Pomemben učinek delovnika je bil zabeležen pri največji jakosti in vzdržljivosti trupa in pomemben učinek skupine pri latencah mišic obliquus externus in internus abdominis ter erector spinae na pričakovane motnje. Interakcijskega učinka skupina x čas nismo zabeležili.

Ugotovili smo, da delovnik podobno vpliva na izbrane senzorično-motorične funkcije trupa pri mlajših in starejših zaposlenih (t.j. primerljiv akutni učinek), medtem ko se kažejo nekatere razlike med skupinama v izhodiščnih vrednostih.

Ključne besede: senzorično-motorične funkcije trupa, sedenje, delovno mesto, bolečina v spodnjem delu hrbta

The effect of sedentary work on trunk functions – in context of older employees

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Aging of the (active) population bring many challenges, which mainly results from a lack of health. The aim of our study was to test, whether there are differences in sensory-motor trunk functions between younger and older employees. We also tested whether work influence them differently.

Fifty (30 younger ($30,5 \pm 3,3$ years) and 20 older ($55,0 \pm 3,8$ years)) healthy employees was tested prior and after work-hours. We measured lumbar range of motion, kinesthetic sense of the trunk, maximal voluntary contraction of trunk extension, endurance of trunk extensors and postural reactions of trunk muscles on expected and unexpected perturbations. We used 2-way ANOVA (group (2) x time (2)). For testing the differences between groups in pre-work test results t-test was applied.

The pre-work test results showed lower maximal voluntary contraction and shorter latencies of obliquus externus and internus abdominis on expected perturbations in older employees. Significant effect of work was found in maximal voluntary contraction and endurance of trunk extensors and the effect of group in latencies of obliquus externus and internus abdominis and erector spinae on expected trunk perturbations. There was no effect of interaction group x time.

We found that work has a similar effect on sensory-motor trunk functions in younger and older employees (e.g. comparable acute effect), but there were some differences between groups in pre-work results.

Keywords: sensory-motor trunk functions, sitting, workplace, lower back pain

Presejanje za funkcijsko manjzmožnost v okviru Programa za krepitev zdravja motivira starejše k aktivnemu življenju

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Uvod: Funkcijska manjzmožnost (FM) starejših oseb predstavlja veliko breme za družbo. Z namenom naslavljanja problema starajoče družbe smo v Sloveniji v okviru Programa za krepitev zdravja poskusno uvedli sistem presejanja za FM, s katerim ugotavljamo in izboljšujemo funkcijski status oseb.

Metode: Presejanje za FM je namenjeno osebam starim 65 let in več. Vključuje vprašalnik (WHO DAS 2.0) in dva testa za oceno statusa mišične moči (test vstajanja s stola, zmogljivost prijema). V primeru FM se osebo napoti na dodatno testiranje telesne pripravljenosti (TP). Vse FM osebe so napotene na delavnico Gibam se, kjer se opolnomočijo za zdrav in aktiven življenjski slog.

Rezultati: V letu 2016 je bilo presejanih 238 oseb. Povprečna starost je bila 71, 9 let. 25,6 % vseh presejanih je bilo M, od tega je bilo FM 18,5 %. 74,4 % vseh presejanih je bilo Ž, od tega je bilo FM 55, 9 %. M imajo boljšo oceno mišičnega statusa kot Ž (9,2 % FM M in 26, 9 % FM Ž ima povprečen ali podpovprečen rezultat). Rezultati testiranja TP in učinkovitost intervencije delavnic so v procesu evalvacije.

Razprava in zaključek: Presejanje za FM je enostaven in hiter način ocenjevanja funkcijskega statusa starejših. Sistem presejanja za FM starejše osebe izjemno motivira za spremembo gibalnih navad. Z namenom naslavljanja problema starajoče družbe, bo potrebno v prihodnosti uvesti nacionalno presejanje za FM. Dobra TP zmanjšuje pojavnost FM pri starejših in omogoča kvalitetno in zdravo dolgoživost.

Ključne besede: program za krepitev zdravja, funkcijska manjzmožnost, testiranje telesne pripravljenosti, aktivno življenje, starejši.

Functional disability screening within Health promotion program motivates elderly for active life

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Introduction: Functional disability (FD) in elderly is representing a major and increasing burden for society. A screening system for FD has been introduced in Slovenia within Health promotion program to assess and improve their functional status.

Methods: Screening system for FD is available to individuals 65 years of age or older. It includes screening interview (WHO DAS 2.0 questionnaire) and two additional tests for assessment of muscular strength. In case of FD detection, the individual is invited to additional functional testing within a workshop »I am moving«, where they empower themselves for healthy and active life.

Results: 238 individuals were screened for FD in 2016. Average age of screened participants was 71.9 years. 25.6 % were M, where FD was present in 18.5 %, 74.4 % were W, where FD was present in 55.9 %. Men are better in muscular strength status (9.2 % of FD M and 26.9 % of FD W have average or below average results). Fitness test results and effect of workshops intervention are under a process of evaluation.

Discussion and conclusions: FD screening is quick and simple way to evaluate average functioning status in elderly. Our experience shows that screening for FD motivates elderly to change their physical activity habits. In order to effectively address challenges related to aging population trend in Slovenia, a National FD screening program needs to be established. Better PF reduce presence of FD and helps to achieve active aging process of elderly population.

Keywords: health promotion program, functional disability, fitness tests, active life, elderly.

Pozitivni učinki plesa na kognitivno funkcijo pri starejših

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Uvod: Gibalni in kognitivni trening sta z obetajoči metodi za spodbujanje pozitivnih učinkov med strukturnimi in funkcionalnimi spremembami možganov, povezanimi s staranjem. Namen te raziskave je bil primerjati učinke gibalne (ne) aktivnosti na možganski nevrotrofični faktor (BDNF), jezikovni spomin in pozornost.

Metode: V študiji je sodelovalo 90 zdravih starejših oseb. Na 30 plesalcih, 30 športnikih in 30 neaktivnih osebah smo merili BDNF ter jezikovni spomin in izvedli dodaten spominski test (VLMT) in test pozornosti (TAP). Dodatno smo 10 plesalcev in 10 kontrolnih oseb z drugimi predpisanimi gibalnimi aktivnostmi spremljali po 6 mesecih, 18 mesecih, dodatno pa jih bomo spremljali še po 5. Tretje meritve 20 preiskovancev bodo zaključene v Juniju 2018.

Rezultati: Po 6 mesecih sta tako skupina plesalcev kot kontrolna skupina napredovali na področju vidno-prostorskega spomina in pozornosti, a le pri plesalcih smo zabeležili statistično značilen dvig BDNF ($p < 0,004$). Po 18 mesecih smo zabeležili napredek pri jezikovnem spominu v obeh skupinah.

Razprava in zaključek: Čeprav vsi podatki še niso zajeti, lahko za zdaj zaključimo, da je zgolj pri plesalcih prišlo do povečanja BDNF in kognitivne funkcije, najverjetneje zaradi večjih kognitivnih zahtev za udejstvovanje v plesu.

Ključne besede: ples, BDNF, spomin, pozornost

Benefits of dancing on cognitive functioning in old age

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Introduction: Physical and cognitive training have proved to be encouraging methods to positively affect age-related structural and functional brain changes. The aim of this investigation is to compare the effects of physical (in)activity on brain-derived neurotrophic factor (BDNF), verbal memory and attention.

Methods: 90 healthy older adults volunteered. We compared 30 dancers with 30 endurance/strength athletes and 30 non-active controls according to BDNF, verbal learning and memory test (VLMT) and tests of attentional performance (TAP). Further, we evaluated the development of 10 dancers and 10 active controls before intervention, after 6 months, 1.5 and 5 years of training. Pretest, posttest 1 and 2 are already finished. The third posttest, that involves 90 subjects for cross-sectional study including 20 subjects for longitudinal study, will be completed in June, 2018.

Results: After 6 months, dancers and active controls enhanced their performances in visual-spatial memory and attention equally, but only the dancing group showed a significant increase of BDNF ($p=0.004$). Results after 18 months revealed significant improvements in verbal memory for both groups.

Discussion and conclusions: Although we are still in the process of data acquisition, we assume that only the dancers will show further increases in BDNF and cognitive functioning due to the conditional and cognitive demands of dancing.

Keywords: dancing, BDNF, memory, attention

Vpliv vadbe za razvoj vzdržljivosti in umovadbe na delovni spomin starostnikov

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Uvod: Kognitivni upad je normalni proces, ki nastopi tekom let. Najbolj sta do-
vzetna delovni spomin in pozornost, kar ob hkratnem upadu telesne zmogljivo-
sti in socialne vključenosti zmanjšuje kakovost življenja. Namen študije je pre-
veriti vpliv vadbe za razvoj vzdržljivosti in umovadbe na delovni spomin.

Metode: Primarne vire smo pridobili na podlagi testne baterije (vprašalniki o
demografskih podatkih, testi gibalnih sposobnosti in izbranih kognitivnih spo-
sobnosti) pri zdravih, pokretnih starostnikih nad 65 let. Udeleženci so 3 krat
tedensko, 3 mesece izvajali 45-minutno vadbo za razvoj vzdržljivosti (60-70
 VO_{2max}) in 20-minutni kognitivni trening. Podatke smo statistično obdelali s po-
močjo Microsoft Office Excel in SPSS.

Rezultati: Rezultati parnega t- testa udeležencev (N=20) kažejo na statistično
pomembne razlike ($p < 0,05$), pri ponovitvi testa pomnenja števil in testu ae-
robne vzdržljivosti ob začetku raziskave in po treh mesecih.

Razprava in zaključek: Skladno s predhodnimi raziskavami, vadba za razvoj
vzdržljivosti in umovadba pozitivno vplivata na priklic števil. Telesna dejavnost,
skupno s kognitivnim treningom spodbudi angiogenezo in nevrogenezo, vpliva
na povečanje in prerazporeditev prekrvavitve možganov, predvsem v prefron-
talnem korteksu, kjer se nahaja delovni spomin. Potrebne so dodatne raziska-
ve za ugotovitev ali so boljši rezultati posledica telesne dejavnosti ali umovadbe.

Ključne besede: vadba za razvoj vzdržljivosti, umovadba, delovni spomin,
starostniki.

The impact of endurance and cognitive training on working memory of the older adults

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Introduction: Cognitive decline is a normal process that occurs over the years. Decline of working memory (WM) and attention, accompanied with reducing of the physical capacity and social inclusion at the same time, reduces the quality of life. The aim of the study is to examine the impact of the endurance and cognitive training (CT) on a WM.

Methods: We acquired the primary data based on a test battery (demographic data questionnaires, tests of physical and selected cognitive abilities) in healthy elderly aged over 65 years. The participants underwent a 3-month (3 x /week) combined sessions of endurance (45 min, 60-70% VO₂max) and CT (20 min). Data was statistically processed using Microsoft Office Excel and SPSS.

Results: The results of paired t-test in sample size (N=20) show statistically significant differences ($p < 0,05$) in the recurrence of the numerical number and aerobic endurance test at the start of the study and after three months.

Discussion and conclusions: In accordance with previous studies, endurance exercise and CT positively influence subject's recall of the numbers. The effect of physical activity, combined with CT, promotes angiogenesis and neurogenesis, increase and redistribute blood circulation, especially in the prefrontal cortex where the WM is located. Further research is needed to determine whether the results are due to endurance exercise or CT.

Keywords: endurance exercise, cognitive training, working memory, elderly.

Telesna aktivnost starostnikov z diabetičnim stopalom

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Uvod: Gibanje je zelo pomemben dejavnik za zdravo staranje. Zdravo staranje pomeni ohranjanje zdravja na vseh ravneh. Sladkorna bolezen tipa 2 je kronično, napredujoče propadanje celic beta v trebušni slinavki, ki proizvajajo inzulin. Zdravljenje zato prilagajamo, v prvi vrsti z zdravim načinom življenja. Kronično zvišana raven glukoze v krvi lahko z leti povzroči okvaro organov ali organskih sistemov. Ena od posledic je lahko tudi nastanek diabetičnega stopala.

Metode: V tem prispevku je bila uporabljena deskriptivna metoda dela z pregledom obstoječe literature. Obdelava podatkov je bila izvedena z uporabo metaanalize podatkov. Zbiranje razpoložljive literature in virov je trajalo od 2007 do 2017 v bazah podatkov: CINAHL, Medline in COBIB.SI.

Rezultati: Diabetično stopalo je posledica kroničnih zapletov sladkorne bolezni. Ker je zmanjšan ali odsoten občutek za bolečino, toploto, hlad in vibracije človek ni pozoren na poškodbe ali pa ob poškodbah ne ukrepa ustrezno. Zaradi okvare občutljivosti se spremeni tudi mehanika hoje.

Razprava in zaključek: Velikega pomena telesne aktivnosti se vse bolj zavedajo tudi sladkorni bolniki. Ob primerni prehrani, rednemu zdravljenju (antidiabetiki, vbrizgavanje inzulina ter redno spremljanje krvnega sladkorja) in redni telesni aktivnosti je mogoče sladkorno bolezen dobro nadzorovati.

Ključne besede: sladkorna bolezen tipa 2, diabetično stopalo, telesna aktivnost starostnikov

Physical activity of the elderly with a diabetic foot

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Introduction: Physical activity is an important factor for health itself and also for elderly people. Healthy aging means maintaining the health at all levels. Diabetes is a chronic, progressive deterioration of beta cells in the pancreas. Therefore, the adaptation of the treatment is necessary, first with a healthy lifestyle. Chronic elevated blood glucose levels can lead to the failure of organs or organ systems over the years. One of the consequences may be the formation of a diabetic foot.

Methods: In this paper a descriptive working method was used to review existing literature. We used descriptive method with literature review to make meta-analysis. The review was restricted to studies published since 2007 to 2017 in database: CINAHL, Medline and COBIB.SI

Results: A diabetic foot is the result of chronic complications of diabetes. As the feeling of pain, heat, cold and vibration are reduced or absent, the patient does not pay attention to injuries or does not take appropriate action when injured. The mechanics of walking also change because of the sensitivity impairment.

Discussion and conclusions: The importance of physical activity is also becoming aware amongst diabetics. Regular diet, regular therapy (antidiabetics, insulin injections, and regular blood sugar monitoring) in addition to regular physical activity can have diabetes well-controlled.

Keywords: diabetes 2, diabetic foot, physical activity of the elderly

Telesna aktivnost in njen pomen za zdravje starostnikov

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Izhodišča: Doseganje visoke starosti je odraz visoke kakovosti življenja. Ključnega pomena je redna telesna aktivnost, ki povečuje sposobnost samostojnega življenja. Namen raziskave je bil ugotoviti pogostost telesne aktivnosti in samostojnosti starostnikov v domačem okolju.

Metode: Raziskovalni vzorec je zajemal starostnike iz Slovenije in 18 drugih sodelujočih držav. Anketiranih je bilo več kot 86.000 posameznikov, starejših od 50 let, med njimi je bilo 2257 starostnikov iz Slovenije od tega jih je bilo 1275 starih 65 in več let. Podatki so analizirani s program SPSS Statistics 20.

Rezultati: 86% starostnikov iz Slovenije nima težav pri opravljanju vsakodnevni aktivnosti. 46% slovenskih starostnikov se ne ukvarja s športom ali intenzivnimi aktivnostmi. Kar 86% starostnikov iz Slovenije se ne poslužuje pomoči izven gospodinjstva. Ugotovljena je bila razlika v samooceni zdravja starostnikov ($F=500,50, p<0,001$) med državami. Slovenija se je uvrstila na 7 mesto. Pri tistih starostnikih, ki so deležni pomoči izven gospodinjstva je samoocena zdravja višja. 70% slovenskih starostnikov ima prekomerno telesno težo.

Razprava in zaključek: Telesna aktivnost starostnikov je nezadostna, telesna teža previsoka, kar pomeni višjo stopnjo tveganja za kronične nenalezljive bolezni. Le z zagotovitvijo ustreznega zdravstvenega varstva, ekonomske blaginje, socialne vključenosti in zdravstvene vzgoje se bo zagotovo zmanjšala pojavnost kroničnih nenalezljivih bolezni.

Ključne besede: telesna aktivnost, starostniki, kakovost življenja, kronične nenalezljive bolezni

Physical activity and its importance for the elderly's health

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Introduction: Achieving a high age is a reflection of the high quality of life. Regular physical activity is crucial and increases the ability to live independently. The aim of the research was to find out the frequency of physical activity of the elderly in the home environment.

Methods: The research sample covered the elderly from Slovenia and 18 other participating countries. More than 86,000 individuals aged over 50 were participated, of whom 2257 were from Slovenia, of whom 1275 were aged 65 and over. The data were analysed with the SPSS Statistics 20 program.

Results: 86% of the elderly people from Slovenia do not have difficulties in performing day-to-day activities. 46% of Slovenian elderly people do not engage in any sports or intensive activities. As many as 86% of the elderly from Slovenia do not need help outside the household. The difference in assessment of health according to the elderly ($F = 500,50$, $p < 0,001$) was found between countries. Slovenia ranked on the 7th place. For those elderly who receive help outside the household, assess their health higher. 70% of Slovenian elderly people have overweight.

Discussion and conclusion: The elderly's body activity is insufficient, the body weight is too high, which means a higher level of risk for the chronic non-communicable diseases. Only by ensuring adequate healthcare, economic prosperity, social inclusion and health education we can reduce the incidence of chronic non-communicable diseases.

Keywords: physical activity, elderly people, quality of life, chronic non-communicable diseases

Ali se čas sedentarnosti na delovnem mestu s starostjo povečuje?

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Dolgotrajna sedentarnost je samostojni dejavnik tveganja za zgodnejšo umrljivost neodvisno od posameznikovega izvajanja gibalne aktivnosti. Z daljšanjem delovne dobe se število starejših zaposlenih oseb povečuje. Prav zato je problematika sedentarnosti starejših delavcev hitro razvijajoče področje raziskovanja, saj rezultati študij poleg znanstvenega doprinosa podajajo pomembne smernice aplikativnega značaja za delovanje in ureditev družbe. Namen naše raziskave je bil ovrednotiti povezanost med starostjo pretežno sedečih delavcev in časom sedentarnosti. V analizo smo vključili študije, ki so objektivno vrednotile čas sedentarnosti. Za vrednotenje povezanosti med povprečno starostjo vzorca preiskovancev in povprečnim časom sedentarnosti na delovnem mestu smo izračunali Pearsonov koeficient povezanosti (r).

V raziskavo smo vključili devet študij. Pearsonov koeficient povezanosti je pokazal zmerno, a statistično neznačilno povezanost med starostjo in časom sedentarnosti na delovnem mestu ($r = 0,48$; $p = 0,19$). Dosedanje študije nakazujejo na povezanost med povečanim časom sedentarnosti in višjo starostjo ter sedentarnim načinom dela. Omejitvi naše korelacijske analize sta predvsem pomanjkanje študij na preiskovancih nižjih starosti in pomanjkanje študij z objektivnim vrednotenjem sedentarnosti. Glede na rezultate narejene korelacijske analize lahko zaključimo, da dosedanje raziskave nakazujejo tendenco povečevanja časa sedentarnosti pretežno sedentarnih delavcev ob staranju.

Ključne besede: sedentarnost, mlajši delavci, starejši delavci, korelacija

Is workplace sedentary behavior increasing with age?

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Sedentary behavior has been identified as a significant risk factor for pre-mortality independently of daily physical activity. At the same time the number of older adults remaining at work increases nowadays. The issue of sedentary behavior in older adults is therefore a growing field of research. The results of studies on this field are not only scientifically important but also have an impact on social order. The aim of our study was to analyze the correlation between age of sedentary workers and workplace sedentary time. Only studies with objectively measured sedentary behavior (e.g. using accelerometer based devices) were included. Pearson correlation coefficient (r) was used to assess the correlation between mean age of sedentary workers and mean workplace sedentary behavior of the samples taken from included studies.

Nine studies were included in analysis, which showed moderate, but statistically non-significant correlation between the analyzed variables ($r = 0,48$; $p = 0,19$).

Previous studies have indicated that sedentary behavior is increasing with age in sedentary workers. The limitations of our investigation are a lack of studies with younger participants and objectively measured sedentary behavior. Considering our results, there is a trend of increased sedentary behavior in older sedentary workers. Further studies are needed to confirm these findings.

Keywords: sedentary behavior, younger workers, older workers, correlation

Občutljivost testov ravnotežja na razlike med mladimi in starejšimi odraslimi

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Uvod: V klinični praksi uporabljamo različne merilne pristope s katerimi spremljamo upad ravnotežja med staranjem. Veljavnost tovrstnih testov določajo merske lastnosti, kot je sposobnost razločevanja med različnimi starostnimi skupinami.

Metode: Z namenom preverjanja občutljivosti (ROC krivulja), smo izmerili 25 mladih ($23,5 \pm 4,1$ let) in 25 starejših ($81,2 \pm 7,3$ let) odraslih oseb. Ravnotežje smo vrednotili s šestimi testi ravnotežja (enonožnim seganjem v različne smeri, izpadnim korakom naprej, hitrim korakom naprej, gibanjem celega telesa naprej in nazaj, seganjem naprej in sposobnostjo upravljanja gibanja skupne točke pritiska telesa na podlago).

Rezultati: Pri vseh testih je vsaj ena od spremenljivk imela visoko diskriminativno moč (ROC površina $> 0,8$, $p < 0,05$, $d > 0,8$). Med enonožnim seganjem v različne smeri smo beležili gibanje skupne točke pritiska telesa na podporno površino (STP), kar omogoča bolj specifično analizo uporabljenih strategij za ohranjanje ravnotežja. Vse spremenljivke gibanja STP med enonožnim seganjem v različne smeri so imele visoko diskriminativno moč. Interakcijski učinek starosti, dolžine seganja in smeri seganja ni bil statistično značilen, razen za frekvenco nihanja STP v anteriorno-posteriorni smeri.

Razprava in zaključek: Izsledki študije bodo v podporo strokovnjakom v klinični praksi pri izbiri veljavnih in uporabnih spremenljivk za analizo ravnotežja. Posledično bodo rezultati pripomogli k pravočasnejšim in bolj učinkovitim preventivnim intervencijam za ohranjanje ravnotežja.

Ključne besede: nihanje telesa, merske značilnost, staranje, padci

Sensitivity of balance tests to alterations in body sway control due to aging

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Introduction: Clinical practice uses different assessment approaches in order to screen for age-related decline in balance control. For such tests to be useful, their metric characteristics must be appropriate. One of such characteristics is the ability to differentiate between different age groups.

Methods: By measuring balance of 25 young (23.5 ± 4.1 years) and 25 elderly (81.2 ± 7.3 years) adults, discrimination power (ROC curve) of six balance test was assessed (star excursion balance test, forward lunge, quick step, leaning forwards and backwards, forward reach and centre-of-pressure (CoP) tracking).

Results: At least one parameter had high discriminating power in all tests observed (ROC area > 0.8 , $p < 0.05$, $d > 0.8$). In this study, CoP was measured during the star excursion balance test that enabled more specific insight into balance control. These CoP derived parameters proved to have high discriminative power. The interaction effect between age, length of reach and reach direction was insignificant. On the contrary, the interaction effect was significant for the frequency of CoP direction changes in anterior-posterior direction.

Discussion and conclusions: The results of this study enable clinicians and other experts dealing with motor decline in elderly to use more valid and useful parameters in different balance tests. Consequently, well-timed and more appropriate intervention strategies can be applied.

Keywords: posture, metric characteristics, elderly adults, young adults, fall prevention

Vpliv starosti na kinestezijo

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Uvod: S staranjem povezane strukturne in morfološke spremembe somato-senzoričnih receptorjev, vida, vestibularnega, mišično-skeletnega sistema in živčevja negativno vplivajo na kinestezijo. V študiji smo želeli ugotoviti razlike kinestetičnih sposobnosti med preiskovanci različnih starosti.

Metode: Celovito vrednotenje kinestetičnih sposobnosti je opravilo 23 mladih odraslih in 23 starostnikov, ki so izpolnili še vprašalnik o celoviti telesni aktivnosti in zdravstveni vprašalnik. Za ugotavljanje razlik med skupinama sta bila uporabljena t-test in test Mann Whitney ter Pearsonov in Spearmanov korelacijski koeficient za ugotavljanje povezanosti med kinestezijo in količino gibalne aktivnosti.

Rezultati: Skupini se razlikujeta v sposobnosti repozicije kolenskega sklepa v smeri iztega, dinamičnega sledenja položaju in dinamičnega sledenja navoru v kolenskem sklepu ter v vseh parametrih statičnega ravnotežja, medtem ko pri površinskem občutenju, repoziciji trupa, reprodukciji navora v kolenskem sklepu in zaznavanju vertikalne razlike med skupinama ni bilo. Sposobnost dinamičnega sledenja navoru in položaju kolenskega sklepa je značilno povezana z ravnotežjem.

Razprava in zaključek: Količina sedenja negativno vpliva na ravnotežje v obeh starostnih skupinah, medtem ko količina in intenzivnost gibalne aktivnosti ne vpliva na kinestetične funkcije. Večje razlike so bile opažene pri zahtevnejših nalogah, ki poleg kinestetičnega zaznavanja zahtevajo še vključenost kognitivnih funkcij.

Ključne besede: staranje, kinestezija, propriocepcija, ravnotežje.

Effect of age on kinaesthesia

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Introduction: The structural and morphological changes of somatosensory receptors, vision, vestibular, nervous and musculoskeletal systems associated with ageing have a negative effect on kinaesthesia. The objective of the study was to determine the differences in kinaesthesia among the subjects of different ages.

Methods: A comprehensive evaluation of kinaesthesia was performed on 23 young adults and 23 elderly people who also completed a questionnaire on the total physical activity and a health questionnaire. To determine the differences between the two groups, the t-test and the Mann Whitney test, as well as the Pearson and Spearman correlation coefficients, were used to determine the association between kinaesthesia and physical activity.

Results: The two groups differ in knee position sense, knee dynamic position sense, the force tracking in the knee and in all static balance parameters, whereas no differences were detected in tactile perception, trunk position sense, force matching in the knee and sense of verticality. The ability of force tracking and knee dynamic position sense are typically linked to some balance parameters.

Discussion and conclusion: The amount of sitting has a negative effect on balance in both age groups, while the amount and intensity of physical activity does not affect kinaesthesia. Greater differences were observed in more complex tasks, which require the inclusion of cognitive functions in addition to kinaesthetic perception.

Keywords: ageing, kinaesthesia, proprioception, balance.

Posterji

Poster presentations

Kulturni vidiki doživljanja menopavze pri ženskah na Cerknškem

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Uvod: Menopavza predstavlja, normalno fazo v življenjskem obdobju ženske. Pri nekaterih ženskah spremljajoči simptomi pomembno vplivajo na kakovost življenja. Namen raziskave je bil preučiti doživljanja menopavzalnega obdobja pri ženskah na Cerknškem.

Metode: Raziskava temelji na kvalitativni deskriptivni metodi. Na namenskem vzorcu šestih žensk, ki so se v času raziskave nahajale v menopavzalnem obdobju ter so živele na območju Cerknice, so bili opravljeni delno strukturirani intervjuji. Podatki so bili analizirani s pomočjo metode analize vsebine.

Rezultati: Identificirane so bile tri osrednje teme: (1) menopavzalno obdobje in kakovost življenja, (2) opazovanje sprememb v menopavzalnem obdobju in (3) doživljanje in sprejemanje menopavzalnega obdobja. Intervjuvanke menijo, da bi bilo potrebno več ozaveščanja žensk o menopavzi. Intervjuvanke so si enotne, da se je kakovost njihovega življenja v menopavzalnem obdobju spremenila na bolje. Kakovost življenja v menopavzi si dvigujejo z ozaveščanjem o sami menopavzi in vsem kar to obdobje prinaša ter tako da poskrbijo zase. Menijo, da bi bila potrebna večja informiranost s strani zdravstvenih delavcev za doseganje boljše kakovosti življenja v tem obdobju.

Razprava in zaključek: Intervjuvanke menopavzalno obdobje doživljajo pozitivno, vendar imajo občutek, da so nezadostno ozaveščene s strani zdravstvenih delavcev. Kažejo se potrebe po ustrezni strategiji nujenja informacij in oblikovanja ustreznih zdravstvenih programov.

Ključne besede: predmenopavza, perimenopavza, postmenopavza, klimakterij, zdravstvena vzgoja

The cultural aspects of experiencing menopause among women in Cerknica region

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Introduction: Menopause is a normal stage of a woman's life. In many women, the accompanying symptoms have a significant impact on the quality of life. The aim of the study was to explore how the menopausal period influenced the life of women living in Cerknica region.

Methods: A qualitative descriptive research design was used. The purposive sample of six women, who were at the time of the study in menopause and were living in Cerknica region, were interviewed by using semi-structured interviews. The data were analysed with the content analysis method.

Results: The analysis identified three themes: (1) menopausal period and quality of life, (2) perceived changes in the menopausal period, (3) experiencing and accepting menopause. Interviewees believe more women should be aware of menopause. All the respondents agree that the quality of their lives improved during menopause. In addition, they improve the quality of their lives by raising awareness about menopause and everything that comes with it. Majority also agree that women should be more informed about this topic and that more health care activities should be implemented in order to improve the quality of life in this period.

Discussion and conclusions: Interviewees experience menopause as positive period in their life, however they feel that they are not well educated by health care professionals. The development of appropriate communication strategy and suitable health care program to reach this objective is needed.

Keywords: premenopause, perimenopause, postmenopause, climacterium, health education

Ples in vadba kot terapija za bolnika s Parkinsonovo boleznijo – študija primera

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Uvod: Ples se v terapevtske namene za različna bolezenska stanja, tako telesna kot duševna, uporablja že vrsto let. Namen raziskave je bil ugotoviti kako ples in vadba vplivata na telesno držo in nekatere gibalne ter kognitivne sposobnosti pri bolniku s Parkinsonovo boleznijo (PB).

Metode: V študijo je bil vključen 74 letni moški s PB. Podatki so bili zbrani s PDQ-39 ter vprašalnikom o zdravju, ki je bil sestavljen na osnovi študija literature o PB. Uporabili smo »vstani in pojdi« test, Bergovo lestvico ravnotežja, Storkov test, Stroopov test, test izdelave poti, teste spomina in ocenjevanje drže. Vaje so potekale 8 tednov, 2x tedensko po 1,5 ure. Vadbena enota je bila sestavljena iz sedečega ogrevanja z elementi sodobnega plesa in baleta, razteznih vaj za skrajšane in obremenjene mišične skupine ter krepilnih vaj za šibke mišice. Plesni del je obsegal učenje plesnih korakov, ki se je sistematično nadgrajevalo, tako, da smo v 8. tednu plesali tri različne plese z osnovnimi koraki.

Rezultati: Opazili smo izboljšanje v vseh gibalnih testih, najbolj izrazito pa je bilo izboljšanje telesne drže, pozornosti ter spomina. Preiskovanec prav tako navaja boljše splošno počutje in kasnejši pojav utrujenosti.

Razprava in zaključek: Plesna in vadbena terapija se je izkazala kot učinkovito sredstvo za izboljšanje gibalnih ter kognitivnih sposobnosti, prav tako pa so pri Parkinsonovi bolezni učinkovite raztezne in krepilne vaje, ki izboljšujejo telesno držo in zmanjšujejo mišično rigidnost.

Ključne besede: Parkinsonova bolezen, plesna terapija, zdravje, telesna aktivnost, vadba

Dance and Exercise as Therapy in Patient with Parkinson's Disease – Case Study

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Introduction: Dance has been used as therapy for different medical conditions – physical and mental – for a number of years. The purpose of this study was to find out how dance and exercise influence body posture and certain motor and cognitive functions in a patient with Parkinson's disease (PD).

Methods: The subject of the study was a 74-year-old man with PD. The data was collected with PDQ-39 and a questionnaire about health, which was composed on the basis of literature on PD. We used standard balance tests, attention, memory and functional tests and postural assessment. The workouts were scheduled two times per week for 8 weeks. The length of a single session was 1.5 hours. Each session consisted of a seated warmup with elements of contemporary dance and ballet, stretching exercises for shortened and overworked muscle groups and strength exercises for weak muscles. The dance part included dance moves that were systematically upgraded to the point where the subject was able to perform three Standard dances at the end of the program.

Results: We noticed improvements in all tests. The biggest improvement was made in body posture, attention span and memory. The subject also pointed out better overall feeling and less tiredness.

Discussion and conclusions: Dance and exercise therapy turned out to be an efficient asset to improve motor and cognitive functions. Stretching and strength exercises that improve body posture and decrease muscle rigidity also seem to be very effective in patients with PD.

Keywords: Parkinson's disease, dance therapy, health, physical activity, exercise

Dejavniki tveganja za razvoj bolezni možganskega žilja pri starejših osebah po kapi

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Uvod: Smrtnost zaradi kapi je odvisna od kakovosti medicinske oskrbe ter prisotnosti dejavnikov tveganja. Namen te študije je bil preučiti prisotnost dejavnikov tveganja za razvoj možgansko-žilnih bolezni pri starejši osebah, ki so preživele kap.

Metode: V študiji je sodelovalo 60 (30 M + 30 Ž) preiskovancev, ki so preživeli epizodo ishemične možganske kapi in imeli kot posledico prisoten blagi nevrološki deficit. (NIHSS 5-15). Povprečna starost preiskovancev je bila 71 let (razpon 45-81). Dejavnike tveganja je popisal nevrolog med kliničnim pregledom preiskovancev.

Rezultati: Najpogosteje zabeleženi dejavniki tveganja so bili arterijska hipertenzija (84,8 %), visok nivo stresa (77,2 %) in nezadostna količina gibalne aktivnosti (77,2 %). Zadnja dva dejavnika se nanašata na življenjski slog in je nanju moč vplivati. Opažena nezadostnost gibalne aktivnosti se je odražala tudi v rezultatih indeksa telesne mase in razmerja med obsegom pasu in kolkov. Vrednosti obeh parametrov so bile namreč nad zgornjo referenčno vrednostjo tako pri moški kot tudi ženskah ($p < 0,05$).

Razprava in zaključek: Rezultati kažejo na visoko prevalenco sedentarnega življenjskega sloga pri starejših, okrevajočih p okapi, kar se odraža v povečanem indeksu telesne mase in neprimernemu razmerju med obsegom pasu in bokov. Sedentarno življenje lahko zavre okrevanje in povzroči večje tveganje za ponovno epizodo (Bašić-Kes in Demarin, 2014). V prihodnje bo z rednimi izobraževalnimi programi v enotah za intenzivno nego potrebno dvigniti ozaveščenost o pomenu zdravega življenjskega sloga pri okrevajočih po kapi.

Ključne besede: kap, gibalna neaktivnost, starejši preživeli

Risk factors for cerebrovascular diseases in older stroke survivors

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Introduction: Mortality caused by stroke depends on the quality of medical care and the presence of risk factors and comorbidities (Lawrence et al., 2015). The aim of this study was to investigate the presence of risk factors for cerebrovascular disease in older stroke survivors.

Methods: The study included 60 (30M+30F) ischemic stroke convalescents with a consequent mild neurologic deficit (NIHSS 5-15). The patients mean age was 71 years (min 45 - max 81). A neurologist recorded risk factors during medical examination.

Results: The most common risk factors were arterial hypertension (84.8%), increased stress level (77.2 %) and insufficient physical activity (77.2 %). The last two factors concern life habits and may be modified. The observed insufficient physical activity, present in more than 70% of subjects, influenced their body mass index as well as their waist-hip ratios. BMI values and waist-hip circumference values were above the upper limit in both women and men ($p < 0.05$).

Discussion and conclusions: The results indicate the high presence of sedentary lifestyle in stroke convalescents, associated with an increased body mass index and an unfavourable waist-hip circumference ratio. Sedentary lifestyle after insult may worsen recovery as well as higher the risk for a relapse (Bašić-Kes and Demarin, 2014). There is a need for regular educational programs in intensive care units in order to improve the opportunities for a healthier lifestyle in stroke survivors.

Keywords: stroke, physical inactivity, elderly convalescent

Zaupanje/nezaupanje starostnikov v zdravstvene delavce

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Populacija starejših se večja po celem svetu. Do leta 2025 naj bi se število starih nad 65 let povzpelo na 1.2 milijardi, do leta 2050 pa na 2 milijardi. V Evropi to predstavlja pravi ekonomski in socialni izziv. Pričakujemo lahko večjo prevalenco pojavljanja kroničnih, duševnih bolezni, komorbidnih in fizičnih motenj. Ključno vlogo pri zagotavljanju kakovostne oskrbe starejših imajo zdravstveni delavci, ki razvijejo na zaupanju temelječ odnos s starostnikom. Velikokrat pa se pri oskrbi starejših srečujejo z njihovim nezaupanjem. Študije namreč kažejo, da se nezaupanje v zdravstvene delavce povečuje, ampak stopnja nezaupanja in razlogi zanj so še nepoznani. Rezultati raziskave v Združenih državah Amerike kažejo, da je nezaupanje v zdravstveni sistem odvisno od posameznikove slabše ocene zdravja. Med drugim, je zaupanje s strani pacientov do medicinskih sester precej odvisno od njihovega znanja in sposobnosti ustvarjanja in razvijanja odnosov.

Ključne besede: starostnik, zdravstveni delavec, zaupanje, nezaupanje

The elderly's trust and distrust of health professionals

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The number of senior citizens is constantly growing all over the world. Until 2025, the number of people over the age of 65 is predicted to break 1.2 billion, and until 2050, two billion people around the world will be over 65. In Europe, this represents a massive economic and social challenge. An even higher prevalence of chronic and mental illnesses, comorbid and physical disorders is to be expected. The key role in ensuring a high-quality care for the elderly is played by health professionals, who develop a trust-based relation with senior citizens. However, these professionals often have to encounter the seniors' distrust of health services. Studies have shown that the distrust of health professionals is growing, but the actual level of distrust and its causes have not been determined yet. The results of the study in the United States show that distrust in the health system is dependent on an individual's poor health assessment. Patient's trust in nurses depends largely on their knowledge and the ability to create and develop relationships.

Keywords: the elderly, health professional, trust, distrust.

Ali sta skupini mlajših starejših in zelo starih različni? Korelati prilagajanja na staranje v dveh starostnih kohortah

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Uvod: Namen te študije je primerjava korelatov prilagajanja na staranje (AtA) med kohorto mlajših starejših in najstarejših odrasli, ter oblikovati dva strukturna modela za raziskovanje korelatov prilagajanja na staranje za ti dve starostni skupini starejših.

Metode: Izvedena je bila mednarodna študija, ki je vključevala vzorec 823 starejših odraslih, starih 65 let in več, ki živijo v domačem okolju. Za ocenjevanje prilagajanja na staranje, subjektivnega blagostanja in občutek koherence so bili uporabljeni različni merski instrumenti. Vprašalnik je vključeval postavke za merjenje socio-demografskih značilnosti (spol, starost, poklicni in zakonski status, izobrazba, velikost gospodinjstva, število odraslih otrok, povprečni družinski letni dohodek, tip prebivališča, samoocena duhovnosti), življenjskega sloga in zdravstvenih značilnosti (samoocena zdravja, nedavno prebolela bolezen, zdravila in prosti čas). Strukturno modeliranje je bilo uporabljeno za oblikovanje strukturnega modela prilagajanja na staranje, ki vsebuje socio-demografske značilnosti, življenjski slog, spremenljivke o zdravstvenem stanju, subjektivnem blagostanju in občutku koherence za obe skupini starejših.

Rezultati: Prosti čas je bil najpomembnejši korelat prilagajanja na staranje za skupino mlajših starejših ($\beta = 0,422$; $p < 0,001$), medtem ko je samoocena duhovnosti najpomembnejši korelat prilagajanja na staranje za skupino najstarejših odraslih ($\beta = 0,711$; $p < 0,001$). Pomembni korelati pojasnjujejo 67,8 % in 73,1 % variabilnosti v prilagajanju na staranje.

Razprava in zaključek: Rezultati, predstavljeni v tej študiji, so izpostavili različne vidike prilagajanja na staranje, opisane v dveh strukturnih modelih za obe skupini starejših. Rezultati tudi nakazujejo potrebo po upoštevanju razlik med proučevanima skupinama starejših pri izvajanju ukrepov zdravstvenega varstva, zlasti glede pomena prostega časa in samoocene duhovnosti.

Ključne besede: starejši odrasli, ki prebivajo v domačem okolju, prilagajanje na staranje, korelati, strukturno modeliranje

Are the young-old and the oldest-old different? Correlates of adjustment to aging in two age cohorts

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Introduction: This study aims to compare the correlates of adjustment to aging (AtA) reported by young-old and oldest-old adults and to build two structural models to explore the correlates of AtA for these two age groups.

Methods: A cross-national study encompassing a community-dwelling sample of 823 older adults aged 65 years and older was undertaken. Several measures were employed to assess AtA, subjective well-being, and sense of coherence. A questionnaire to determine socio-demographic (sex, age, professional and marital status, education, household, adult children, family's annual income, living setting, and self-reported spirituality), lifestyle and health-related characteristics (perceived health, recent disease, medication, and leisure) was also used. Structural equation modeling was employed to investigate a structural model of AtA, comprising socio-demographic, lifestyle, and health-related variables, as well as SWB and SOC for both groups.

Results: Leisure was the most significant correlate of AtA for the young-old ($\beta = .422$; $p < .001$) while self-reported spirituality was the most significant correlate of AtA for the oldest-old ($\beta = .711$; $p < .001$). Significant correlates explain 67.8 % and 73.1 % of the variability of AtA, respectively.

Discussion and conclusions: The results presented in this study highlighted different perspectives of AtA, outlined in two structural models, for the groups, and the need of addressing the differences between these, when implementing health care interventions, in particular the relevance of leisure and self-reported spirituality.

Keywords: Community-dwelling older adults, Adjustment to aging, Correlates; Structural equation modelling

Psihološki izzivi terapije s starejšimi osebami

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Uvod: Cilj raziskave je oceniti psiho-emocionalne izzive in pomembnost individualno usmerjene terapije za starejše odrasle.

Metode: V raziskavo smo vključili 86 starejših odraslih, starejših od 65 let ($M = 71,7$, $SD = 4,6$). Uporabili smo naslednje instrumente: lestvico samospoštovanja (Self-Esteem Scale - SES) in vprašalnik za oceno kognitivnega statusa (Mini-Mental State Examination - MMSE). Pridobili smo tudi socialno-demografske podatke, vključno s spolom (57,5 % žensk), zakonskim stanom (37,5 % poročenih) in izobrazbo (39,2 % obvezno šolanje). Izvedena je bila bivariantna analiza.

Rezultati: Rezultati so prinesli niz petih opisnih kategorij, ki so zajele različne načine zaznavanja psiho-čustvenih izzivov pri starejših odraslih in ki so odražale zaznavanje pomembnosti uporabe osebnega računalnika: "časovna perspektiva", "starajoče se telo", "avtonomija in nadzor", "kognitivna vzdržljivost" in "izguba in spominjanje". Bivariantna analiza je pokazala, da je bila "avtonomija in nadzor" povezana s "starajočim se telesom" ($r = .552$, $p < .001$) in "kognitivna vzdržljivost" s "časovno perspektivo" ($r = .425$, $p < .001$). Slednja kategorija je bilo povezano tudi z »izgubo in ponovnim razmislekom« ($r = .616$, $p < .001$).

Razprava in zaključek: Raziskava poudari pomen uporabe osebnega računalnika za starejše odrasle, ki se soočajo s psiho-emocionalnimi izzivi v starosti. Intervencije usmerjene v starejše lahko koristi razumevanju specifičnih vprašanj starejših, kar je pomemben element spodbujanja uspešnega staranja in zmanjševanje razlik v zdravju.

Ključne besede: staranje, skrb, skladnost, starejši odrasli, v osebo usmerjena terapija, psiho-emocionalni izzivi, uspešno staranje.

Therapy with older clients: What are the psychological challenges?

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Introduction: This research aims to evaluate psycho-emotional challenges for older adults and the relevance of person-centered therapy (PCT) for older adults.

Methods: Eighty-six older adults, aged above 65 years ($M = 71.7$; $SD = 4.6$) were assessed with the the Self-Esteem Scale ('SES') and the Mini-Mental State Examination (MMSE). Socio-demographic data, including gender (57.5% women), marital status (37.5% married) and education (39.2% mandatory school) were also assessed. Bivariate associations were performed.

Results: Results yielded a set of five descriptive categories that captured the distinct ways older adults perceived psycho-emotional challenges and that reflected the individual's perceived importance of PCT: 'time perspective', 'the aging body', 'autonomy and control', 'cognitive endurance' and 'loss and reminiscing'. Regarding bivariate associations, results indicated that 'autonomy and control' was associated with the 'aging body' ($r = .552$, $p < .001$) and 'cognitive endurance' with 'time perspective' ($r = .425$, $p < .001$). This latter was also associated with 'loss and reminiscing' ($r = .616$, $p < .001$).

Discussion and conclusions: This study highlights the importance of PCT for older adults facing psycho-emotional challenges in old age. Interventions with older adults may benefit from clearly understanding older adults' specific issues as an important component for promoting successful aging and reducing health disparities.

Keywords: Aging, care, congruence, older adults, person-centered therapy, psycho-emotional challenges, successful aging.

Povezljivi gospodinjski aparati za večjo varnost in samostojnost starostnikov

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Uvod: Digitalizacija vpliva na vsa področja družbe, tako na različne organizacije kot tudi na posameznike. Sodobne tehnologije, kot so internet, mobilna telefonija, internet stvari in umetna inteligenca, pospešujejo nastajanje novih izdelkov in storitev. Navedene tehnologije uporabljamo pri razvoju povezljivih gospodinjskih aparatov, ki omogočajo uporabo, prilagojeno za specifične zahteve posameznih skupin uporabnikov.

Metode: Pri snovanju povezljivih gospodinjskih aparatov smo izhajali iz zahtev, pridobljenih s trgov. Posebna pozornost je bila namenjena uporabniški izkušnji z aparati in mobilno aplikacijo, ki smo jo razvili za upravljanje aparatov. Poleg aparatov in aplikacije za pametne telefone, je v ozadju še več skrbno razvitih rešitev.

Rezultati: Ustvarili smo povezljive gospodinjske aparate, ki omogočajo samostojno uporabo tudi starostnikom. Proizvajalcu je omogočen vpogled v to, kako aparati delujejo in na kakšen način jih uporabljajo. Uporabniki z njimi pridobijo napredne aparate, ki olajšajo vsakodnevna opravila, povečujejo kvaliteto življenja, so varni, njihova uporaba zagotavlja zasebnost, so enostavni za uporabo in omogočajo zdrav način življenja.

Razprava in zaključek: Sodobne tehnologije omogočajo razvoj izdelkov in storitev, ki so primerni tudi za starejšo populacijo. Osnovno vodilo pri njihovem načrtovanju mora biti enostavnost uporabe in pomoč starostnikom, da samostojno opravljajo vsakodnevna opravila na svojem domu in tako ohranjajo kvaliteto življenja.

Ključne besede: digitalizacija družbe, internet stvari (IoT), pametni gospodinjski aparati, digitalne storitve, starostniki

Connected home appliances for greater safety and autonomy of the elderly

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Introduction: Digitalization affects all areas of society, organizations and individuals. Modern technologies, such as Internet, mobile telephony, Internet of Things and artificial intelligence, are fostering the development of new products and services. These technologies are used in the creation of connected home appliances that allow for use, adapted to the specifics of individual user groups.

Methods: In the designing of connected home appliances, we proceeded from the requirements derived from the markets. A special concern was the user experience with the appliances and the mobile application that we developed for the management of appliances. In addition to appliances and applications for smartphones, there are even more carefully developed solutions in the background.

Results: We have created connected home appliances, which also enable the elderly to use them independently. The manufacturer is given insight into how the appliances work and how they are used. The users get advanced devices that facilitate daily tasks, increase the quality of life, are safe, their use warrants privacy, are easy to use, and support a healthy lifestyle.

Discussion and conclusions: Modern technologies enable the development of products and services that are suitable for the elderly population. The basic guideline in their conceptualization should be the ease of use and help the elderly to do their daily work in their own home independently, thus preserving the quality of life.

Keywords: digitalization of society, Internet of Things (IoT), smart home appliances, digital services, elderly

Učinki redne vadbe pri starejših

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Uvod: Staranje prebivalstva postaja izziv sodobnega časa. Pomembno je, kako starejši preživljajo obdobje po 65 letu starosti. Velik pomen imata gibanje in redna vadba. Leta 2006 smo v Kamniku začeli z vadbo za gibljivost, ravnotežje in moč za starejše ženske v starosti 65 let in več.

Metode: Raziskava je potekala od 2006 – 2011. V vadbo je bilo vključenih 32 žensk vadbene skupine in 32 žensk kontrolne skupine, ki v vadbo niso bile vključene. Vadba je prvo leto intenzivno potekala z obiski dvakrat tedensko po 60 minut, nato pa enkrat tedensko po 60 minut. Testiranja smo izvedli po Fullertonovi testni bateriji za ugotavljanje funkcionalne telesne pripravljenosti starejših. Meritve za vadbena skupino smo izvedli oktobra 2006, julija 2007 in julija 2011 ter za kontrolno skupino oktobra 2006 in julija 2011. Uporabili smo t-test, F-test in analizo kovariance.

Rezultati: Vadbena skupina je dosegla bistven napredek po končani polletni vadbi pri vseh testih, prav tako pri večini testov leta 2007 in 2011, saj smo retardacijo opazili le pri testu ravnotežja. Vadbena skupina je dosegla bistveno boljše rezultate gibalnih sposobnosti tudi v primerjavi s kontrolno skupino.

Razprava in zaključek: Redna vadba lahko pomembno vpliva na izboljšanje gibalnih sposobnosti in s tem na funkcionalno usposobljenost posameznika, ki se odraža z boljšim zdravjem, dobrim počutjem ter samostojnem opravljanju vseh dnevnih opravil, ki omogočajo svobodno gibanje, širijo bivanjski prostor in neodvisno ter samostojno življenje brez pomoči drugih.

Ključne besede: starostniki, ženske, redna vadba, gibalne sposobnosti, zdravje

Effects of regular exercise on elderly people

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Introduction: The main challenge of modern times has become the aging of the population. It has become very important how the elderly spend their life after age of 65. Movement and regular exercises are of great importance. In 2006, in the town of Kamnik, we started exercising by simply improving mobility, balance and power for elderly women aged 65 and over.

Methods: The research was conducted from years 2006 till 2011. We included 32 women from the exercising group and 32 women from the control group who weren't exercising at all. Exercises intensified through the first year, which elderly women attended twice a week for 60 minutes and later on once a week for 60 minutes. The tests were carried out with Fullerton's test battery, which can determine the functional fitness level of the elderly. Exercising group was being measured in October of 2006, July of 2007 and July of 2011. Control group was being measured in October of 2006 and July of 2011. Our measurements included t-test, F-test and covariance analysis.

Results: The exercising group showed significant progress in all tests after completing the half-year training course. The same results occurred in 2007 and 2011; the only retardation was noted in the balance test. The exercising group gained significantly better motor capabilities compared to the control group.

Discussion and conclusions: Regular exercises can significantly improve physical abilities and thus the functional competence of the individuals, which is reflected in better health and well-being, better independent performance of all basic tasks which in the process enable free physical movement, enlargement of living space and autonomous living without the help of others.

Keywords: elderly, women, regular exercise, motor skills, health

Preprečevanje neenakosti v zdravju starejših z zagotavljanjem transkulturene zdravstvene nege

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Uvod: Naraščanje števila starejših se kaže v strukturi pacientov v bolnišnicah in drugih zdravstvenih ter socialnih ustanovah, ki zaradi povečane morbiditete in prevalence kroničnih bolezni potrebujejo zdravstveno oskrbo. Namen prispevka je izpostaviti pomen transkulturene zdravstvene nege v zagotavljanju enakosti obravnave in preprečevanju ageizma.

Metode: Uporabljen je bil raziskovalni dizajn razpravnega prispevka. V namenski izbor literature so bile vključene naslednje baze podatkov: CINAHL, MEDLINE, SAGE in Willey. Iskanje literature je vključevalo časovni (2008–2017) in vsebinski kriterij opredeljen s ključnimi besedami v angleškem jeziku (transcultural nursing, elderly, health disparities). V končno presojo je bilo vključenih 11 zadetkov relevantnih za razpravo.

Rezultati: Izmed 11 obravnavanih zadetkov je le eden neposredno izpostavil etno-kulturni model gerontološke zdravstvene nege s katerim je mogoče pojasniti vplive, izide in odgovore z zdravjem povezanega vedenja in umeščenostjo le tega v določeno kulturno okolje. Intervencije zdravstvene nege morajo upoštevati ne le tradicionalna kulturna prepričanja ali prakse starejših, temveč tudi kako na ta prepričanja vpliva družba. Intervencije zdravstvene nege morajo zato biti v čim večji meri individualizirane in prilagojene kulturnemu ozadju starejšega odraslega.

Diskusija in zaključek: Zdravstveni delavci morajo razvijati novo znanje o gerontološki zdravstveni negi z zavedanjem, da je tudi ta kulturno umeščena.

Ključne besede: gerontološka zdravstvena nega, medkulturne kompetence, etno-kulturni model, klinična praksa

Preventing health disparities in elderly by ensuring transcultural nursing care

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Introduction: The increase in the number of elderly is reflected in the structure of patients in hospitals and other health or social institutions, which due to the increased morbidity and prevalence of chronic diseases, require health care. The aim of the paper is to highlight the implications of transcultural nursing in ensuring health equality and prevention of ageism.

Methods: The research design of a discussion article was applied. The following databases were included in the purposive selection of literature: CINAHL, MEDLINE, SAGE and Willey. The literature search included time (2008-2017) and content criterion defined by key words in English (transcultural nursing, elderly, health disparities). The final assessment included 11 results relevant to the discussion.

Results: Of the 11 examined articles, only one was directly related to the ethno-cultural model of gerontological nursing, which can help explain the effects, outcomes and responses of health-related behavior placed in a unique cultural environment. Nursing interventions must consider not only the traditional cultural beliefs or practices of the elderly, but also how society influences these beliefs. Nursing interventions must therefore be highly individualized and adapted to the cultural background of an older adult.

Discussion and Conclusion: Health care professionals need to develop new knowledge about gerontological nursing with an understanding that it is firmly placed within culture.

Keywords: gerontological nursing, cross-cultural competences, ethno-cultural model, clinical practice

Jezikovni most v turizmu za osebe s posebnimi potrebami in starejše

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Uvod: Pomen sodelovanja pri razvoju zdravstvenega turizma je nesporen. Vendar pa je treba uporabiti jezikovni most, da bo sodelovanje učinkovito. Menijo, da se bo usklajevanje povečalo zaradi povezovanja med ministrstvi, ki se ukvarjajo s to študijo. Zagotavljanje jezikovne enotnosti bo povečalo učinkovitost skupne strukture, ki jo je treba vzpostaviti. Ugotovljeno je bilo, da so bili nekateri pojmi, ki se uporabljajo v zdravstvenem turizmu, zlasti v skrbstvenem in rehabilitacijskem turizmu, razlagani na različne načine, nekateri pojmi pa niso bili opredeljeni. Cilj jezikovne enotnosti je vzpostaviti sodelovanje za razvoj negovalnega in rehabilitacijskega turizma za invalide in starejše ljudi, organizacijo negovalnih služb in pridobiti nekaj podpore za to področje v okviru Mednarodnega programa zdravstvenega turizma.

Metode: Institucije uporabljajo različne koncepte v mednarodnem prostoru. Preučena je bila zakonodaja institucij, povezanih s temo, in pregledana mednarodna literatura, da bi tako nacionalno in mednarodno sodelovanje zagotovili na ustrezen način. Koncepti, uporabljeni v tem kontekstu, so bili pregledani na podlagi naslednjih tematskih sklopov: storitve, nastanitve in delovna sila.

Rezultati: V literaturi je naveden turizem, ki je dostopen in pokriva starejšo populacijo. Druga vrsta turistov so ljudje z ovirami na invalidskih vozičkih. Prav tako je iz literature razvidno, da sta starejšim ponujeni dve vrsti turizma, poimenovali čezmejna oskrba in višji turizem. Poleg tega sta omenjena tudi oskrba in rehabilitacija, vendar ne tako pogosto. Posledica razvoja v svetu je vedno večje povpraševanje starejših in invalidov po storitvah v okviru turizma. V tem kontekstu je v literaturi upoštevan koncept negovalnega in rehabilitacijskega turizma, ki pokriva vse vrste turizma v okviru zdravstvenega turizma za invalide in starejše osebe.

Razprava in zaključek: Kot rezultat študije je bilo ugotovljeno, da bodo povezani partnerji oblikovali celovit koncept turizma zdravljenja, oskrbe in rehabilitacije, da bi razvili skupno razumevanje in usklajevanje nacionalnih in mednarodnih storitev, ki so na voljo invalidom in starejšim.

Ključne besede: jezikovni most, rehabilitacija, zdravstveni turizem, turizem za osebe s posebnimi potrebami in starejše

Building a Bridge Language for Disabled and Elderly Care Tourism

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Introduction: The importance of cooperation in the development of health tourism is indisputable. However, a bridge language must be used in order for cooperation to function properly. It is thought that coordination will increase thanks to the development of a bridge language among the ministries concerned with this study. The provision of the language union will increase the effectiveness of the common structure to be established. It has been observed that some terms used in health tourism, especially caring and rehabilitation tourism in institutions, have been interpreted in different ways and some concepts have not been defined. The aim is to construct cooperations for development of caring and rehabilitation tourism for disabled and elderly people, organisations of caring services, and raising some support for this field within the International Health Tourism Program.

Methods: It is understood that the concepts used by institutions are the points where they are separated by international use. The legislation of institutions related to the subject has been examined ;and the International literature has been scanned in order to ensure that both national and international cooperation in a qualified way. The concepts used in this field are examined under these tags: service, setting and workforce.

Results: The most accessible tourism is mentioned in the literature. Accessible tourism is seen to cover all barriers and elderly people. Another kind of tourist related to the barriers is wheelchair tourism. It is also seen that the types of tourism offered to the elderly are called cross border care and senior tourism. Apart from these, care and rehabilitation tourism is also mentioned, but not common. Developments in the world are the demand for the elderly and the disabled to offer these services within the scope of tourism. In this context, the concept of care and rehabilitation tourism is considered in the literature to cover all tourism types within the scope of health tourism for the disabled and the elderly.

Discussion and conclusions: As a result of the study, it was determined that a comprehensive concept of treatment, care and rehabilitation tourism will be formed by the related parties in order to develop common understanding and coordination in national and international services offered to disabled and the elderly.

Keywords: bridge language, rehabilitation, health tourism, disabled and elderly care tourism, elderly care tourism

STAR-VITAL: Združeni ukrepi za vitalnost starejših delavcev

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Finančne spodbude in zaostrovanje upokojitvenih pogojev niso primeren vzvod dviga zaposlitvene stopnje starejših, če jih ne spremlja izboljšanje delovnih pogojev in fleksibilnost pri upokojevanju. Podaljšanje delovne aktivnosti je torej odgovornost posameznikov, podjetij in države, odvija pa se na delovnem mestu v stiku med starejšim delavcem in delodajalcem. Ravno zato je osrednji cilj projekta STAR-VITAL podpora podjetjem pri vzpostavljanju varnega in zdravega delovnega mesta usmerjenega v podaljševanje delovne aktivnosti starejših zaposlenih v Sloveniji. Aktivnosti projekta so zasnovane po Modelu zdravih delovnih mest (WHO), oziroma štirih dimenzijah na katerih je potrebno načrtno in kontinuirano izvajati aktivnosti v organizacijah: fizično in psihosocialno delovno okolje, osebni zdravstveni viri delavca ter sodelovanje z lokalnim in širšim družbenim okoljem. Ker se potrebe in zmožnosti podjetij razlikujejo, so projektne aktivnosti oblikovane tako, da omogočajo individualiziran pristop k uvažanju ukrepov v 100 malih in srednjih podjetij in 10 velikih podjetij na ravni celotne Zahodne Slovenije. Pomemben izziv projekta je v identifikaciji in prebujanju interesov tako posameznikov kot podjetij, saj ti ukrepi deležnikom ne prinašajo takojšnjih finančnih koristi. V odsotnosti subvencij in neposrednih finančnih spodbud delodajalcem se delodajalci nahajajo v vlogi vratarjev, ki v veliki meri moderirajo, kaj se bo dogajalo s starejšimi zaposlenimi na delovnem mestu.

Ključne besede: starejši zaposleni, zdravo delovno mesto, delovna aktivnost

STAR-VITAL: Joint measures for the vitality of older workers

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Financial incentives and the stricter retirement conditions are not the appropriate leverage for raising the employment rate of the elderly unless accompanied by improved working conditions and flexibility in transition to retirement. Prolongation of work activity is therefore the responsibility of individuals, companies and the state, and it takes place at the workplace in contact between an older worker and an employer. That's why the main goal of the STAR-VITAL project is to support companies in setting up a safe and healthy workplace aimed at extending working activity of older workers in Slovenia.

The project activities are based on the Model of Healthy Workplaces (WHO) i.e. four dimensions on which it is necessary to plan and implement activities in organizations: physical and psychosocial work environment, personal health resources of the worker and cooperation with the social environment. Since the needs and capabilities of companies differ, project activities are designed to enable an individualized approach to the implementation of measures in 100 SMEs and 10 large companies at the level of the entire Western Slovenia.

An important challenge lies in identifying and developing the interests of both individuals and businesses, as these actions do not bring immediate financial benefits. In the absence of subsidies and direct financial incentives, employers are in the role of gatekeepers, who largely moderate what will happen to older employees in the workplace.

Keywords: older workers, healthy workplace, work activity

Učinek vadbe na telesne zmogljivosti institucionaliziranih starostnikov

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Uvod: Število starejših in njihov delež v celotni populaciji se povečujeta veliko hitreje kot v drugih starostnih skupinah. Ocenjuje se, da se bo v naslednjem desetletju podvojilo tudi število oseb v institucionalizirani oskrbi. Ker pa se glavnina starejših sooča z gibalnimi omejitvami in funkcionalnim upadom, je pomemben cilj ohranjanje njihovih telesnih zmogljivosti in s tem neodvisnost institucionaliziranih starostnikov.

Metode: V raziskavi je sodelovalo 20 žensk (84 ± 8 let). Razdeljene so bile v kontrolno (CG, $n = 9$) in intervencijsko (TG, $n = 11$) skupino. Testna baterija je vključevala antropometrične meritve (telesna masa, telesna višina, telesna sestava) in meritve telesnih zmogljivosti (kratek test telesnih zmogljivosti in test moči stiska pesti). Meritve so bile izvedene pred trimesečno intervencijo vadbenega programa z elastičnim uporom (VPEU) in po njej.

Rezultati: Pomemben učinek interakcije skupina \times čas se je po trimesečnem vadbenem programu pokazal pri skupnem rezultatu kratkega testa telesnih zmogljivosti ($p = .005$), kakor tudi pri hitrosti hoje ($p = .019$) in vstajanju s stola ($p = .005$).

Razprava in zaključek: Nedavno je delovna skupina kliničnih raziskovalcev poudarila potrebo po izvajanju novih strategij za preprečevanje ali upočasnitev funkcionalnega upada prebivalstva v domovih za ostarele. Vadba VPEU je sorazmerno enostavna za izvajanje, zato bi lahko predstavljala obetavno orodje za preprečevanje funkcionalnega upada institucionaliziranih starostnikov.

Ključne besede: domovi upokojujencev, funkcionalna zmogljivost, trening

Effect of exercise on functional performance in institutionalized elderly

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Introduction: Both the number of elderly in the population and their proportion within the total population are increasing at a much faster rate than any other age group. Consequently, it is estimated that in the next decade the number of persons in institutionalized care will be also doubled. An essential feature of institutionalized elderly is the presence of impaired physical performance, mobility disorders, and functional decline. Therefore, it is important to counteract these conditions and preserve the independence of the elderly.

Methods: Twenty elderly women (84 ± 8 years) were randomized into two groups, control (CG, $n = 9$) and intervention (TG, $n = 11$) group. Test battery included anthropometric measurements and functional test (Short Physical Performance battery – SPPB) and hand grip. Anthropometric and functional test were measured PRE and POST three months of intervention with elastic resistance training (ERT).

Results: Baseline and post-training testing showed a significant group \times time effects for SPPB total score ($p = .005$), as well as gait speed ($p = .019$) and chair rise ($p = .005$).

Discussion and conclusions: Recently, a task force of clinical researchers emphasized the need to implement new strategies to prevent or slow down disability and functional decline in nursing homes residents. ERT sessions are relatively simple for implementation, and could therefore, represent a useful tool to counteract functional decline in institutionalized elderly.

Keywords: nursing homes, functional performance, training

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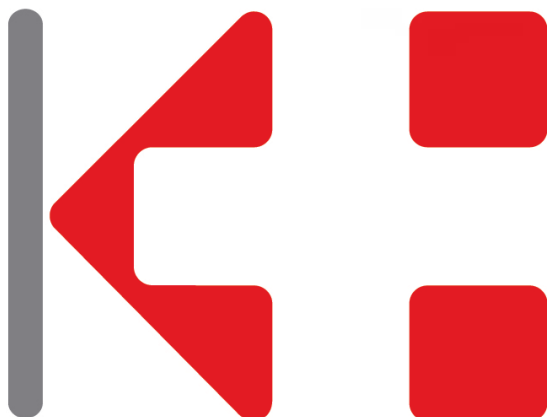
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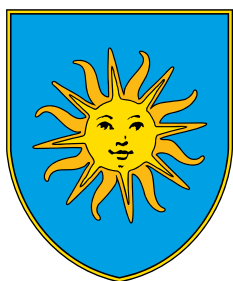


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