

**ZDRAVJE DELOVNO AKTIVNIH
IN STAREJŠIH ODRASLIH**

**HEALTH OF WORKING-AGE
AND OLDER ADULTS**

**Zbornik povzetkov z recenzijo
Book of Abstracts**

Edited by Ana Petelin



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zdravje delovno aktivnih in starejših odraslih
health of working-age and older adults

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Preface

Zdravje delovno aktivnih in starejših odraslih

Fakulteta za vede o zdravju v letu 2024 organizira že sedmo letno konferenco v ciklu letnih konferenc s področja zdravja različnih starostnih skupin, tokrat prvič združujemo dve starostni skupini pod skupno temo »Zdravje delovno aktivnih in starejših odraslih«.

Konferenca je namenjena izmenjavi mnenj, izsledkov raziskav in izkušenj strokovnjakov s področja zdravja delovno aktivnih in starejših odraslih. V publikaciji in na sami konferenci celostno obravnavamo zdravje z vidika telesne aktivnosti, prehrane, psihosocialnega blagostanja ter uporabe sodobnih tehnoloških rešitev. Objavljeni povzetki podajajo vpogled v ključne probleme, izzive in priložnosti na področju zdravja delovno aktivnih in starejših odraslih, z osredotočenostjo na kronične bolezni, zdravje marginaliziranih skupin ter specifične potrebe žensk in moških. Obravnavana so tudi vprašanja duševnega zdravja, vpliv prehrane na zdravje ter uporaba sodobnih informacijskih tehnologij za izboljšanje dostopa do zdravstvenih storitev. Prispevki izpostavljajo izzive ergonomije, gibalne (ne)aktivnosti in sedentarnega vedenja ter predstavljajo rešitve za preventivo in rehabilitacijo, ki prispevajo k boljši kakovosti življenja in telesni zmogljivosti.

Zahvaljujemo se vsem predavateljem in udeležencem, ki s svojimi prispevki bogatijo to pomembno srečanje, in želimo, da konferenca prinese nova spoznanja ter usmeritve za nadaljnje delo na področju zdravja delovno aktivnih in starejših odraslih. Naj bo to korak naprej k bolj zdravemu in kakovostnemu življenju vseh nas.

*Ana Petelin in Darjan Smajla,
Programski odbor konference*

Health of Working-Age and Older Adults

In 2024, the Faculty of Health Sciences is organising the seventh annual conference in the cycle of annual conferences in the field of health of different age groups. This time, for the first time, we are bringing together two age groups under the common theme “Health of working-age and older adults”.

The purpose of the conference is to share opinions, research findings and experiences of experts in the field of health of professionals and older adults. In the publication and at the conference itself, health is discussed comprehensively in terms of physical activity, nutrition, psychosocial well-being and the use of modern technological solutions. The published summaries provide an insight into the key issues, challenges and opportunities for the health of working and older adults, with a focus on chronic diseases, the health of marginalised groups and the specific needs of women and men. Mental health issues, the impact of nutrition on health and the use of modern information technologies to improve access to health services are also discussed. The contributions present the challenges of ergonomics, physical (in)activity and sedentary behaviour and present solutions for prevention and rehabilitation that contribute to a better quality of life and physical performance.

We thank all speakers and participants for enriching this important conference with their contributions and hope that the conference will provide new insights and directions for further work in the field of working-age population and older adults. May this be a step forward towards better health and quality of life for us all.

Ana Petelin and Darjan Smajla
Conference Programme Committee

**Vabljeni
predavatelji**
Invited lecturers



David G. Behm je eden največjih svetovnih strokovnjakov na področju znanosti o človeškem gibanju in športu. Svojo akademsko pot je začel na Univerzi v Ottawi, kjer je leta 1979 diplomiral iz telesne vzgoje, leta 1980 pa iz pedagogike. Leta 1990 je zaključil magisterij na področju biodinamike človeka. Leta 1997 pa je na Univerzi McGill v Montrealu v Quebecu pridobil doktorat iz znanosti o rehabilitaciji. Zaposlen je bil na Dawson College, Montreal, Quebec (1991-1995) in Univerzi Regina, Saskatchewan (1985-1988). Na Memorial University of Newfoundland (MUN) je leta 1995 začel kot docent in leta 2000 napredoval v izrednega profesorja, leta 2004 pa postal redni profesor. Od leta 2008 do 2014 je bil prodekan za podiplomski študij in raziskave. Od leta 2015 pa ima naziv univerzitetnega raziskovalnega profesorja. Prof. dr. Behm je v

svoji karieri prejel številna priznanja in nagrade, kar kaže na njegovo predanost raziskovanju in poučevanju.

David G. Behm is one of the world's top experts in human movement and sport sciences. He embarked on his academic journey at the University of Ottawa, where he earned a Bachelor of Physical Education in 1979 and a Bachelor of Education in 1980. He completed a Master of Science in Human Biodynamics in 1990, in 1997 he achieved his Doctor of Philosophy in Rehabilitation Science from McGill University, Montreal Quebec. His academic career includes several full-time positions, beginning as a Lecturer at Dawson College, Montreal, Quebec (1991-1995), and at the University of Regina, Saskatchewan (1985-1988). His tenure at Memorial University of Newfoundland (MUN) has been extensive, starting as an Assistant Professor in 1995 and progressing to Associate Professor in 2000 and in 2004 he became a Professor at MUN and later served as the Associate Dean of Graduate Studies and Research from 2008 to 2014. Since 2015, he has held the prestigious title of University Research Professor. Throughout his career, prof. dr. Behm has been recognized with numerous appointments and awards, reflecting his dedication to research and teaching.



Brankica Rimac did her PhD in Sociology at the Croatian Catholic University in Zagreb; Values, Identity and social changes in Croatian society with the topic: Spirituality and life satisfaction of patients with chronic diseases. She worked at KBC Zagreb in the Clinic for rheumatic diseases and rehabilitation. She was a head nurse - assistant director for nursing KBC Zagreb and was also a manager for the service for joint medical and nonmedical affairs. She has held a number of positions in civil society in the Republic of Croatia: president of HUMS for two terms, external member of the Gender Equality Committee of the Parliament of the Republic of Croatia. Vice-president of EFN for two terms. She received awards; Honorary Fellowship, Royal College of Nursing, United Kingdom, International Human Rights and Nursing Award, University of Surrey,

Great Britain, and the honourable member of the Nurses and Midwives Association of Slovenia, Nurses and Midwives Association of Slovenia, Slovenia. She teaches at Libertas International University, for physiotherapists and at the School of Medicine, University of Zagreb, as part of the nursing degree programme. She publishes professional and scientific articles, book chapters and gives numerous lectures at national and international nursing events.

Brankica Rimac je doktorirala je iz študijskega programa Sociologija: Vrednote, identiteta in socialne spremembe v hrvaški družbi na Hrvatskem katoliškem sveučilišču v Zagrebu, z disertacijo z naslovom: Duhovnost i zadovoljstvo životom bolesnika s kroničnim bolestimaje. Delala je v KBC Zagreb na Kliniki za revmatske bolezni in rehabilitacijo, kjer je bila glavna medicinska sestra - pomočnica direktorja za zdravstveno. Poleg tega je bila tudi vodja službe za skupne medicinske in nemedicinske zadeve. Zasedala je številne funkcije v civilni družbi Republike Hrvaške, med drugim je bila predsednica Hrvatskog udruženja medicinskih sestara (HUMS) v dveh mandatih ter zunanja članica Odbora za enakost spolov pri Saboru Republike Hrvaške. Prav tako je bila podpredsednica Evropske federacije medicinskih sester (EFN) v dveh mandatih. Za svoje delo je prejela številne nagrade, med njimi: naziv Honorary Fellowship, podeljen s strani Royal College of Nursing v Združenem kraljestvu, Mednarodno nagrado za človekove pravice in medicinsko nego, podeljeno na Univerzi v Surreyju, Velika Britanija ter naziv častne članice Zbornice zdravstvene in babiške nege slovenije – Zveza strokovnih društev medicinskih sester, babic in zdravstvenih tehnikov Slovenije. Brankica Rimac poučuje fizioterapevte na Libertas International University ter zdravstveno nego na dodiplomskem študiju Medicinske fakultete Univerze v Zagrebu. Aktivno objavlja strokovne in znanstvene članke ter poglavja v knjigah, poleg tega pa redno predava na nacionalnih in mednarodnih dogodkih s področja zdravstvene nege.



Aleksandra Mišan je leta 1996 na Fakulteti za naravoslovje in matematiko Univerze v Novem Sadu diplomirala iz kemije, leta 2001 pa na isti univerzi magistrirala in leta 2009 doktorirala iz biokemije. Na začetku svoje kariere (1997-2000) je Aleksandra delala kot asistentka za kemijo in biokemijo na Fakulteti za kmetijstvo in na Fakulteti za tehnologijo Univerze v Novem Sadu. Med letoma 2000 in 2007 je bila zaposlena na Tehnološki fakulteti, Inštitutu za tehnologijo mesa, kot namestnica koordinatorja na oddelku za HPLC in AAS v Laboratoriju za preskušanje živil in krme. Od januarja 2007 pa dela kot raziskovalka na Inštitutu za živilsko tehnologijo v Novem Sadu. Poleg znanstvenega dela je Aleksandra med letoma 2007 in 2011 delala kot koordinatorka Oddelka za instrumentalno kemijsko analizo v akreditiranem laboratoriju za preskušanje

živil in krme na inštitutu. Strokovno se ukvarja s kemijo živil s posebnim poudarkom na kromatografskih metodah (HPLC in GC), naravnih antioksidantih, funkcionalnih živilih, oksidacijskih procesih in ocenjevanju roka uporabnosti. Aleksandra je članica različnih znanstvenih združenj in recenzentka več znanstvenih revij ter avtorica ali soavtorica več kot 60 objav v recenziranih znanstvenih revijah.

Aleksandra Mišan obtained bachelor's degree in Chemistry from the Faculty of Science and Mathematics, University of Novi Sad in 1996; MSc and PhD titles in Biochemistry from the same University in 2001 and 2009, respectively. At the beginning of her career (1997-2000), Aleksandra worked as a teaching assistant of Chemistry and Biochemistry at the Faculty of Agriculture and at the Faculty of Technology, University of Novi Sad. From 2000 to 2007 she worked at the Faculty of Technology, Institute of Meat Technology as a vice-coordinator of HPLC and AAS departments of the Laboratory for Food and Feed Testing. Starting from January 2007, Aleksandra works as a researcher at the Institute of Food Technology in Novi Sad. Apart from her scientific work, from 2007 to 2011, Aleksandra worked as a coordinator of the Department of Instrumental Chemical Analysis of the accredited Laboratory for Food and Feed Testing of the Institute. Professionally, Aleksandra is interested in food chemistry with special emphasis on chromatographic methods (HPLC and GC), natural antioxidants, functional foods, oxidative processes and shelf-life estimation. Aleksandra is a member of various scientific societies and reviewer of several scientific journals and author or co-author of more than 60 publications in peer-reviewed scientific journals.



Snježana Schuster je izredna profesorica in višja znanstvena sodelavka na zagrebški Univerzi za zdravstvene vede na katedri za Fizioterapijo ter na Fakulteti za kineziologijo na katedri za Medicino športa in vadbe v Zagrebu na Hrvaškem. Predava na področju fizioterapije, pri čemer se osredotoča predvsem na področje zdravja žensk in žensk v športu. Specializirana je za področje obvladovanja bolečine med nosečnostjo, porodom in po porodu. Magistrirala je iz področja fizioterapije in arheologije. Njeno znanstveno-raziskovalno delo obsega področja bioantropologije, humane paleopatologije in eksperimentalne fizioterapije. Za svoje znanstvenoraziskovalno delo je prejela več evropskih štipendij. Je tudi članica delovne skupine Europe Region World Physiotherapy, delovna skupina Educa-

tion & Research Matters.

Snježana Schuster is Associate Professor and Senior Research Associate at the University of Applied Health Sciences, Department of Physiotherapy, and at the Faculty of Kinesiology, Department of Sports and Exercise Medicine in Zagreb, Croatia. She teaches theory and practise of physiotherapy, physiotherapy for women's health and women in sports. She specialises in pain management during pregnancy, childbirth and the postpartum period. She has a Master's degree in both physiotherapy and archaeology. She conducts scientific research in the fields of bioanthropology, human palaeopathology and experimental physiotherapy. She has been awarded with several scholarships (EU) for her work in science and research. She is a member of the Europe Region World Physiotherapy, working group Education & Research Matters.

**Plenarna
predavanja**
Plenary lectures

Alternatives to Stretching: Flexibility and Health Strategies for Seniors

David G Behm

*School of Human Kinetics and Recreation
Memorial University of Newfoundland*

Stretching has traditionally been the primary means for increasing range of motion (ROM). With society's rapidly growing ageing population, restricted flexibility due to ageing and lack of activity is a major problem contributing to musculoskeletal health-related concerns. It is important to provide a variety of strategies to enhance flexibility and strength, decrease the incidence of musculotendinous injuries as well as improve the performance of activities of daily living and not just sports performance. Recent research reported that all types of resistance training, except calisthenics can also increase ROM. Another tool to enhance flexibility is foam rolling. Whereas an acute foam rolling session can increase ROM for more than 60-minutes, foam rolling training can provide large ROM increases when performed for more than 4-weeks. Unlike the performance impairments found with prolonged static stretching, foam rolling training does not induce significant performance deficits. Local vibration devices are another recent development to increase ROM and enhance performance. Instrument Assisted Soft Tissue Mobilization (IASTM) is similar to manual massage or foam rolling as it involves placing pressure on the tissues using metal tools that conform to specific body areas. Improved ROM with a single IASTM session has been reported following durations of 2- and 5-minutes, with improvements sustained for 45 minutes. IASTM training studies of 3-6 weeks duration have also reported ROM improvements with no reports of performance decrements. Floss bands are typically applied tight enough to restrict blood flow. A single floss band treatment provides small to moderate magnitude increases in ROM, jumping, and strength performance. In summary, there are diverse strategies to improve flexibility and strength that can enhance musculoskeletal health in an ageing population.

Spirituality as a source of strength in dealing with chronic diseases

Brankica Rimac

Libertas međunarodno sveučilište, Zagreb

Introduction: What does an overview of the origin, meaning and use of the term 'spirituality' bring, from a historical-systemic point of view? These linguistic considerations open up the need to thematize and reflect on the anthropological aspect of spirituality: under the reasonable assumption that only man has spirituality, it is necessary to say what follows from that for its correct understanding. The inevitable finitude of the human being, its vulnerability (of which illness is one of the eminent expressions) and finally mortality come to the fore. However, society changes over time, it is historical, so it is necessary to explore at least some of the most important theoretical approaches to its understanding as elaborated by contemporary sociology. One of the key signs of modernity, is usually cited in the literature as the main feature of our modernity.

Content presentation: The concept of spirituality was originally related to the Christian religious context, but gradually in the last few decades it separated from that context precisely due to the process of secularization. In the concept of modernity, secularization and postmodernity, we warn of places that point to spirituality as a possible goal towards which a (post)modern individual more or less consciously strives. It has been shown in all the referenced theories that the withdrawal of religion leaves a void that confronts the individual with the question of the meaning of his own existence and with spirituality as a possible practical answer to that question. Spirituality should be comprehensively presented, with special attention to its meaning and importance in medical care in general and for patients with chronic diseases in particular. This is then followed by a presentation of research objectives and methods; this work is not purely theoretical in nature, but aims to 'record' the state of affairs in relation to medical care for patients with chronic diseases and to understand the importance of spirituality in their lives, i.e. its relationship with life satisfaction and its role in maintaining the quality of life under chronic disease conditions.

Conclusions: Spirituality concerns, first of all, generally religiously, man's relationship with a higher being, that is, with the sphere of the holy and divine. Spirituality also refers to a special quality of life that permeates the entire human being. So, that it integrates all its dimensions, going beyond only the physiological and psychological taken separately. Finally, spirituality also expresses man's need to give and receive love, to keep hope and trust, to find the meaning of life and its difficult moments (accidents, illness, death) on a personal way of life with the goal of self-realization and life satisfaction. It is evident from everything that the concept of spirituality is neutral with regard to faith in God - it neither necessarily includes it, nor excludes it, it depends on life contexts and existential determinations of people.

Keywords: spirituality, chronic diseases, health, patient

Enhancing Metabolic Health: Exploring the Role of Plant-Based Bioactives

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Institute of Food Technology in Novi Sad, University of Novi Sad, Serbia

Introduction: Metabolic syndrome (MS), defined as a combination of central obesity, glucose intolerance, atherogenic dyslipidemia, and high blood pressure, and related comorbidities, poses substantial healthcare challenges among older individuals.

Methods: A considerable amount of research conducted at the Institute of Food Technology has focused on formulating cereal-based products for individuals with MS. Three strategic directions have been explored: changing the base recipe, adding “functional ingredients,” and valorizing fruit and vegetable by-products rich in bioactives.

Results: We have demonstrated that the use of buckwheat flour instead of wheat flour can significantly enhance the functionality of cereal-based products by increasing the content of dietary fibers and flavonoids, such as rutin and quercetin, through a dietetic and a randomized, placebo-controlled, crossover intervention studies. In addition to, we proved that pomace, a juice production by-product, when added to cookies, positively affects cardiovascular risk factors and liver function indicators in healthy women volunteers.

Discussion and conclusions: A significant group of secondary biomolecules consists of plant polyphenols, which are found abundantly in vegetables, fruits, cocoa beans, tea, and herbal medicine. These molecules possess various beneficial properties that can ameliorate metabolic syndrome, such as anti-inflammatory, antihyperlipidemic, antioxidant, and hypoglycemic effects. Unfortunately, large quantities of plant polyphenols are wasted. Our research group is currently working on finding “green” and sustainable solutions for valorizing these compounds from byproducts and waste streams.

Acknowledgment: This work is a part of a bilateral project between Slovenia and Serbia: “Sustainable food for healthy future”, 2023-2025.

Keywords: metabolic syndrome, plant phenolics, cereal based products, “green” extracts

„Coping with pain: Exploring the health and physical activity patterns of working women “

Snježana Schuster

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In recent years, scientific interest has focused on the effects of health and physical activity on various types of pain and pain conditions in populations. There is a wide research scope that encompasses the understanding of pain accepted as an integral component of aging or specific physiological circumstances such as pregnancy and childbirth. Due to the impact of different types of pain on the reproductive health of working women, health habits and levels of physical activity are analyzed, particularly in relation to chronic pain conditions. The results indicate the importance of quality physical activity and maintaining healthy habits for the prevention and reduction of painful conditions and states. Are we moving in the right direction with research? How much can research provide and be useful guidance for improving preventive and combined health programs as well as in policies that should support the well-being of working women?

Keywords: pain science, health, physical activity, women

Konferenčni povzetki
Conference abstracts

Sekcija/Section

**Duševno zdravje delovno aktivnih
in starejših odraslih**

Mental health of working-age and older adults

Vabljeno predavanje

Aktualni trendi varovanja in krepitve duševnega zdravja na delovnem mestu

*Ditka Vidmar, Tatjana Novak Šubara, Karmen Stariha
Nacionalni inštitut za javno zdravje, Ljubljana, Slovenija*

Izhodišča in namen: Po podatkih Evropske agencije za varnost in zdravje pri delu je kar 50 do 60 % vseh izgubljenih delovnih dni posledica z delom povezanega stresa in neobvladanih psihosocialnih tveganj. Letni stroški z delom povezanega stresa in težav v duševnem zdravju so ocenjeni na 4 % nacionalnega BDP. V Sloveniji so duševne in vedenjske motnje četrty najpogostejši razlog za bolniško odsotnost in vodilni razlog za invalidsko upokožitev I. kategorije. Vse to so razlogi, da se globalno in tudi v Sloveniji krepki zavedanje o vplivu psihosocialnih delovnih pogojev na razvoj in poglobljanje težav v duševnem zdravju. Po drugi strani pa ob tem prihaja v ospredje pomen preventivne skrbi za duševno zdravje pri delu. Slednje namreč prinaša pomembne koristi za posameznike, delovne organizacije in širšo družbo.

Predstavitev vsebine: Skrb za dobro duševno počutje na delovnem mestu je skupna zaveza in odgovornost delodajalcev in zaposlenih, delovna mesta pa so optimalna okolja za krepitev duševnega zdravja. Doslej prevladujočo osredotočenost na ukrepe na delovnem mestu, usmerjene na posameznika, je potrebno dopolniti z organizacijskimi intervencijami, usmerjenimi v ustrezne delovne pogoje, kar je poudarjeno tudi v globalnih pobudah in mednarodnih smernicah. V skladu s smernicami Svetovne zdravstvene organizacije in njihovim strateškim dokumentom skupaj z Mednarodno organizacijo dela so ključne strategije za preprečevanje slabega duševnega zdravja pri delu (1) preprečevanje škode, kar vključuje obvladovanje psihosocialnih tveganj na delovnem mestu, (2) krepitev pozitivnih vidikov dela, kompetenc in virov zaposlenih ter (3) odzivanje na težave in podpora delavcem s težavami v duševnem zdravju. Tudi v Sloveniji se v sklopu Nacionalnega programa duševnega zdravja 2018-2028, skladno z mednarodnimi smernicami, pomemben del aktivnosti usmerja v preprečevanje škode z informiranjem in ozaveščanjem strokovne ter splošne javnosti o pomenu in načinih obvladovanja psihosocialnih tveganj na delovnem mestu. Pri tem je ključna kombinacija organizacijskih in individualnih ukrepov, ki pomenijo – če so primerno izbrani in izvedeni – naložbo s pozitivnim donosom (ROI) v vrednosti do 13,6 € za vsak vloženi evro.

Sklepne ugotovitve: Doživljanje prekomernega stresa pri delu je mogoče v delovnih organizacijah učinkovito preprečevati s pravočasnim odkrivanjem neobvladanih psihosocialnih tveganj ter z izvajanjem ustreznih ukrepov za njihovo obvladovanje. Vodstveni in vodilni delavci zato potrebujejo ustrezna znanja za obvladovanje teh tveganj ter za ukrepanje ob duševnih stiskah zaposlenih. Vsi zaposleni pa potrebujejo znanja za prepoznavanje in ustrezno ukrepanje ob znakih prekomernega delovnega stresa pri sebi in svojih sodelavcih ter informacije o strokovnih virih pomoči ob težavah v duševnem zdravju.

Ključne besede: duševno zdravje na delovnem mestu, krepitev duševnega zdravja, psihosocialna tveganja, Nacionalni program duševnega zdravja

Invited lecture

Current trends in protecting and promoting mental health at work

*Ditka Vidmar, Tatjana Novak Šubara, Karmen Stariha
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Introduction and purpose: According to the European Agency for Safety and Health at Work, 50-60% of all lost working days are due to work-related stress and poorly managed psychosocial risks. The annual cost of work-related stress and mental health disorders is estimated at 4% of national GDP. In Slovenia, mental and behavioural disorders are the fourth most common reason for sickness absence and the leading reason for category I disability retirement. These are all reasons why there is a growing awareness, both globally and in Slovenia, of the impact of psychosocial working conditions on the development and worsening of mental health issues. On the other hand, the importance of preventive care for mental health at work is also coming to the fore. The latter has important benefits for individuals, work organisations and society at large.

Content presentation: Mental well-being in the workplace is a shared commitment and responsibility between employers and employees, and workplaces are optimal environments for promoting mental health. The prevailing focus on individual-oriented workplace interventions needs to be complemented by organisational interventions focused on appropriate working conditions, as also highlighted in global initiatives and international guidelines. In line with the WHO guidelines and a joint strategy document with the International Labour Organisation, the key strategies for preventing poor mental health at work are (1) preventing harm, which includes managing psychosocial risks in the workplace, (2) enhancing positive aspects of work, employee competencies and resources, and (3) responding to and supporting workers with mental health issues. In Slovenia, the National Mental Health Programme 2018-2028, in line with international guidelines, also focuses a significant part of its activities on harm prevention by informing and raising awareness among professionals and the general public about the importance of and ways to manage psychosocial risks in the workplace. The key here is a combination of organisational and individual measures, which - if properly selected and implemented - represent a positive return on investment (ROI) of up to €13.6 for every €1 invested.

Conclusions: The experience of excessive stress at work can be effectively prevented in work organisations through the early identification of psychosocial risks and the implementation of appropriate measures to manage them. Managers and supervisors therefore need the appropriate skills to manage these risks and to deal with mental distress of their employees. All employees need the skills to recognise and act appropriately on signs of excessive work stress in themselves and their colleagues, and information on professional sources of help for mental health issues.

Keywords: mental health at work, mental health promotion, psychosocial risks, National Mental Health Programme

Prevalenca osamljenosti med uporabniki domov za starejše občane

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Uvod: Osamljenost predstavlja negativno izkušnjo razkoraka med želeno in doseženo osebno mrežo odnosov. Razumeti jo je potrebno kot subjektivni fenomen, saj ni vedno odvisna od pomanjkanja neposrednih stikov z ljudmi - človek se lahko počuti osamljenega v družbi in se ne počuti osamljenega, če je sam. Kaže se kot ena najpogostejših čustvenih stisk, s katerimi se spopadajo tudi uporabniki domov za starejše občane in je povezana z različnimi negativnimi zdravstvenimi izidi ter poslabšano kakovostjo življenja. Namen raziskave je bil opisati pogostost in stopnjo osamljenosti ter razumeti dejavnike povezane z osamljenostjo med uporabniki doma za starejše občane.

Metode: V kvantitativni empirični raziskavi smo uporabili De Jong Gierveldovo 11-delno lestvico osamljenosti in preko ustnega anketiranja v letu 2024 pridobili podatke od 107 izmed 337 stanovalcev dveh domov za starejše občane v Obalno-kraški regiji.

Rezultati: Rezultati opisne statistične analize kažejo, da je zmerno osamljenih 43,9 % (n = 47) vprašanih, hudo osamljenih pa 10,3 % (n = 11). Od tega je čustveno osamljenih 29,9 % (n = 32), skoraj četrtina (22,4 %, n = 24) je socialno osamljenih. Korelacijske analize kažejo, da so pogostejše osamljeni tisti, ki svoje zdravje ocenjujejo kot slabše (p = 0,006). Ostale značilnosti vprašanih, kot so spol, starost, zakonski stan, stopnja izobrazbe in čas bivanja v domu za starejše občane se s pojavnostjo osamljenosti ne povezujejo.

Razprava in zaključki: Osamljenost vodi do poslabšanja zdravstvenega stanja in slabih zdravstvenih izidov zato jo je potrebno čimprej prepoznati in ukrepati. Medicinska sestra lahko prepozna osamljenost pri posamezniku s kombinacijo opazovanja, pogovora ter uporabo standardiziranih orodij za oceno osamljenosti. V literaturi zasledimo raznovrstne aktivnosti za preprečevanje in zmanjševanje občutka osamljenosti med starejšimi odraslimi, nastanjenimi v domovih za starejše občane, med katerimi so najpogostejše družabne in gibalne aktivnosti.

Ključne besede: osamljenost, starejši odrasli, dom za starejše občane, zdravstvena nega

The prevalence of loneliness among users of nursing home residents

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Introduction: Loneliness represents a negative experience of a discrepancy between the desired and achieved personal network of relationships. It needs to be understood as a subjective phenomenon, as it is not always dependent on a lack of direct contact with people - a person can feel lonely in company and not feel lonely when alone. It manifests as one of the most common emotional distresses faced also by nursing home residents and is associated with various negative health outcomes and diminished quality of life. The purpose of the study was to describe the frequency and degree of loneliness and to understand the factors associated with loneliness among nursing home residents.

Methods: In a quantitative empirical study, we used the De Jong Gierveld 11-item loneliness scale and obtained data through oral surveys in 2024 from 107 out of 337 residents of two nursing homes in the Coastal-Karst region.

Results: Descriptive statistical analysis results show that 43.9% ($n = 47$) of respondents are moderately lonely, while 10.3% ($n = 11$) are severely lonely. Of this emotional loneliness affects 29.9% ($n = 32$), and almost a quarter (22.4%, $n = 24$) experience social loneliness. Correlation analyses indicate that those who rate their health as poorer are more frequently lonely ($p = 0.006$). Other characteristics of respondents, such as gender, age, marital status, level of education, and length of stay in the nursing home, are not associated with the occurrence of loneliness.

Discussion and conclusions: Loneliness leads to worsened health status and poor health outcomes, so it needs to be recognized and addressed promptly. A nurse can identify loneliness in an individual through a combination of observation, conversation, and the use of standardized loneliness assessment tools. Various activities for preventing and reducing loneliness among nursing home residents are found in the literature, among which social and physical activities are the most common.

Keywords: older adults, nursing home, loneliness, nursing

Psihosocialni programi v podporo razrešitve izzivov tveganih vedenj v digitalnem okolju

Nataša Demšar Pečak

Ministrstvo za delo družino, socialne zadeve in enake možnosti

Izhodišča in namen: S prispevkom želimo izpostaviti pomen brezplačnih interventnih programov pri opolnomočenju uporabnikov pri iskanju psihosocialne pomoči in podpore. Različni psihosocialni programi so namenjeni preprečevanju in reševanju različnih stisk posameznih ranljivih skupin prebivalstva in se oblikujejo tako, da upoštevajo značilnosti in potrebe posamezne ciljne skupine uporabnikov. Prispevek še posebno naslovi pomen mreže psihosocialnih programov v podporo družini in posameznikom v stiski, ki se srečujejo z izzivi tveganih spletnih vedenj, za razrešitev katerih potrebujejo strokovno pomoč, saj jim sami niso kos. Interventni psihosocialni programi v podporo in zaščito družin za varnost v digitalnem okolju so financirani s strani Ministrstva za delo, družino, socialne zadeve in enake možnosti.

Predstavitev vsebine: Za boljšo možnost enake dostopnosti za vse, si država poleg intervencij v sklopu zdravstva, prizadeva tudi z omenjenimi sofinanciranimi programi. S tem želi država doseči ranljive skupine in zmanjšati neenakost pri dostopnosti tovrstnih storitev. V prispevku je predstavljen program za podporo zasvojenim z digitalno tehnologijo, ki ga izvaja Zavoda NORA – LogOut, center pomoči pri prekomerni rabi interneta in je prvi specializirani center pomoči ob različnih tveganih spletnih vedenjih. Program je namenjen nudenju individualne strokovne in skupinske pomoči zasvojenim z digitalnimi napravami, oziroma celostnemu urejanju oseb z nekemičnimi oblikami zasvojenosti, zasvojenim in njihovim svojcem, medinstitucionalnim povezovanjem z individualnim, družinskim, partnerskim in skupinskim načinom dela. V sklopu omenjenega programa pomoči so organizirane tudi specializirane ambulante za zdravljenje digitalnih zasvojenosti.

Sklepne ugotovitve: Digitalizacija sicer res omogoča nove načine komuniciranja, izobraževanja, nakupovanja, zabave in izvajanja različnih aktivnosti prek interneta, vendar je treba opozoriti, da daje digitalno okolje na eni strani neomejene možnosti za izboljšanje kakovosti življenja, omogoča večjo stopnjo enakosti in socialne vključenosti družin, lahko na drugi strani predstavlja tveganje in povečuje ranljivost družinskih članov vseh generacij. Prevelika izpostavljenost zaslonom in spletnim dejavnostim je skrb vzbujajoča tudi za duševno zdravje družinskih članov vseh generacij. Država si mora prizadevati izboljšati digitalno blaginjo družinskih članov, z zagotavljanjem zdravljenja, pomoči, obveščanjem, izobraževanjem in ozaveščanjem o uravnoteženi in zdravi uporabi sodobnih medijev in zaslonske tehnologije.

Ključne besede: digitalno okolje, družina, psihosocialni programi, nekemična zasvojenost

Psychosocial programmes to support the resolution of the challenges of risky behaviours in the digital environment

Nataša Demšar Pečak

Ministry of Labour, Family, Social Affairs and Equal Opportunities

Introduction and purpose: With this paper, we want to highlight the importance of free intervention programs in empowering users in seeking psychosocial help and support. Various psychosocial programs are intended to prevent and solve various problems of individual vulnerable groups of the population and are designed to consider the characteristics of the needs of each target group of users. The contribution particularly addresses the importance of a network of psychosocial programs in families and individuals with support in need, who are faced with the challenges of risky online behaviors, to solve which they need professional help, as they are unable to cope on their own. Psychosocial intervention programs to support and protect families for safety in the digital environment are financed by the Ministry of Labour, Family, Social Affairs and Equal Opportunities

Content presentation: For a better possibility of equal accessibility for all, the state, in addition to interventions in the field of healthcare, also strives with the co-financed programs. With this, the state wants to reach vulnerable groups and reduce inequality in the availability of such services. The article presents a program for support for those addicted to digital technology, which is implemented by the NORA Institute - LogOut, a center for help with excessive use of the Internet and is the first specialized center for help with various risky online behaviors. The program is aimed at offering individual professional and group help to those addicted to digital devices, or holistic treatment of persons with non-chemical forms of addiction, addicts and their relatives, inter-institutional integration with individual, family, partnership, and group work methods. As part of the aid program, specialized clinics for the treatment of digital addictions are also organized.

Conclusions: Digitization does indeed enable new ways of communicating, education, shopping, entertainment and carrying out various activities via the Internet, but it should be noted that on the one hand, the digital environment offers unlimited possibilities for improving the quality of life, enables a greater level of equality and social inclusion of families, on the other hand, it can pose a risk and increase the vulnerability of family members of all generations. Excessive exposure to screens and online activities is also a concern for the mental health of family members of all generations. The state must strive to improve the digital well-being of family members by providing treatment, assistance, information, education, and awareness about the balanced and healthy use of modern media and screen technology.

Keywords: digital environment, family, psychosocial programs, non-chemical addiction

Osamljenost pri osebah z demenco: čuti, omejitve in vloga bližnjih odnosov

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Uvod: Osebe z demenco so pogosto izpostavljene večjemu tveganju za zmerno ali hudo osamljenost, ki je lahko posledica tako upada kognitivnih sposobnosti kot tudi neskladnih pričakovanj ali neprimernih odzivov okolice. Raziskovanje psihosocialnih izkušenj pri osebah z demenco je ključnega pomena za izboljšanje kakovosti njihovega življenja.

Metode: Celovit sistematičen pregled kvalitativnih raziskav na področju osamljenosti, kognitivnega upada in demence je bil opravljen brez časovne omejitve, z namenom pregleda obstoječih študij. V tematski analizi smo izpostavili teme ‚stimulacija in distrakcija‘, ‚kognitivne omejitve in druge izgube‘, ter ‚vloga okolja‘.

Ugotovitve: Raziskovanje psihosocialnih izkušenj oseb z demenco poudarja pomembnost vključevanja oseb z demenco v raziskovanje na način, ki je prilagojen njihovim vsakokratnim sposobnostim. Osamljenost pri osebah z demenco se vzpostavlja postopoma, pri čemer osebe z demenco povezujejo osamljenost z upadom kognitivnih zmožnosti posredno, tako da se postopoma umikajo iz socialnih odnosov, za kar pogosto navajajo, da se odločijo same. Takšno umikajoče vedenje je pogosto povezano z neustreznim odzivom okolice, ki lahko z nerealnimi pričakovanji postavi osebe z demenco v neenakovreden položaj, s čimer se lahko osamljenost še pogloblja. Oskrbovalci so bolj kot osebe z demenco namreč osredotočeni na kognitivni upad, pri čemer so pogosto manj pozorni na druge vidike zdravja ali potreb oseb z demenco. Povezovanje kot nasprotje osamljenosti pri osebah z demenco temelji na skupnih trenutkih in medsebojnem razumevanju, ki se razvija iz skupnih izkušenj in skozi daljše obdobje. V takem odnosu osebe z demenco računajo na intuitivno razumevanje njihovih bližnjih o tem, kaj bi v določeni situaciji naredile ali želele. Raziskovanje teh kompenzacijskih strategij, ki jih razvijajo osebe z demenco tekom napredujoče bolezni je smiselno nadgrajevati.

Razprava in zaključki: V kontekstu demence primanjkuje raziskovalne usmerjenosti na temo osamljenosti, ki bi se osredotočala v izboljšanje kakovosti življenja. Sistematičen pregled literature potrjuje, da je osamljenost in kognitivni upad mogoče preučevati tudi v kontekstu zmerne in hude demence, in sicer s primernimi prilagoditvami, ki ne temeljijo izključno na verbalnih tehnikah zbiranja podatkov. Pri tem je pomembno poglobiti razumevanje tako kompenzacijskih strategij oseb z demenco kot tudi zmožnosti njihove ožje socialne mreže.

Ključne besede: osamljenost, demenca, kvalitativno raziskovanje, sistematični pregled literature

Loneliness in people with dementia: senses, limitations and the role of close relationships

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Introduction: People with dementia are often exposed to a higher risk of moderate or severe loneliness, which can be the result of both cognitive decline and inconsistent expectations or inappropriate responses from the environment. Researching the psychosocial experiences of people with dementia is crucial to improving their quality of life.

Methods: A comprehensive systematic review of qualitative research in the field of loneliness, cognitive decline and dementia was conducted without time constraints, with the aim of reviewing existing studies. In the thematic analysis, we highlighted the subthemes of ‚stimulation and distraction‘, ‚cognitive limitations and other losses‘, and ‚the role of the environment‘.

Findings: Researching the psychosocial experiences of people with dementia highlights the importance of including people with dementia in research in a way that is adapted to their individual abilities. Loneliness in people with dementia develops gradually, with people with dementia associating loneliness with cognitive decline indirectly by gradually withdrawing from social relationships, often expressing this as their own choice. Such withdrawing behavior is often associated with an inadequate response from the environment, which can put people with dementia in an unequal position with unrealistic expectations, that can further intensify the feeling of loneliness. Caregivers are more than people with dementia focused on cognitive decline, often paying less attention to other aspects of the health or needs of people with dementia. Connectedness as the opposite of loneliness in people with dementia is founded on shared moments and mutual understanding that develops from shared experiences and over a long period of time. In such a relationship, people with dementia rely on their loved ones' intuitive understanding of what they would do or want in a given situation. Further research is needed on these compensatory strategies, which are developed by people with dementia during the course of the progressive disease.

Discussion and conclusions: In the context of dementia, there is a lack of research orientation on the topic of loneliness focused on improving the quality of life. A systematic review of the literature suggests that loneliness and cognitive decline can also be studied in the context of moderate and severe dementia with appropriate adjustments that are not based exclusively on verbal data collection techniques. It is important to deepen the understanding of both the compensatory strategies of people with dementia as well as the compensatory capacities of their closer social network.

Keywords: loneliness, dementia, qualitative research, systematic literature review

Kako krepiti duševno zdravje starejših odraslih v slovenskem prostoru?

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Izhodišča in namen: Starejši odrasli so izrazito heterogena skupina; obstajajo velike razlike med njimi pri spoprijemanju z različnimi izzivi. Ob nižji zdravstveni (in digitalni) pismenosti ter višji socialni izključenosti in osamljenosti, sta prisotni stigma in diskriminacija ter visoko tveganje za revščino po upokojitvi. Duševno zdravje ogroža tiha epidemija demence, porast depresivne motnje in nasilja. Kljub temu, da so potrebe po dolgotrajni oskrbi in kadrovski primanjkljaj na tem področju za starejšo populacijo še vedno v ospredju politike in javnosti, je nujno poudarjati varovalne dejavnike duševnega zdravja ter pozitivne vidike staranja in starejših odraslih, kar bo izboljšalo motivacijo le-teh za vključevanje, in s tem tudi boljše dostopnost do programov pomoči.

Predstavitev vsebine: v okviru Akcijskega načrta duševnega zdravja (Nacionalni program duševnega zdravja 2018-2028) smo na pobudo Interdisciplinarne delovne skupine (IDS) izvedli dogodke v lokalni skupnosti: »Dan odprtih vrat za starejše občane« in »Sejem dolgožive družbe« ter pripravili poročilo o izvedenih aktivnostih, kot spodbudo vključenim in ostalim občinam. Pripravljena in široko diseminirana so bila gradiva za laično in strokovno populacijo. Izvedena Nacionalna konferenca je nakazala nadaljnje aktivnosti glede na potrebe starejših odraslih. Akcijski načrt za obdobje 2024-2028 pa (ob okrepitvi IDS z novimi člani), predvideva bolj intenzivno spodbudo za proaktivno delo lokalnih skupnosti in oblikovanje zavezujočih strategij občinskih svetov, nadaljnje intenzivno informiranje in ozaveščanje starejših skozi strokovno-družabne dogodke, ter vzpostavitev dostopnih info-točk. Znotraj IDS bomo podpirali krepitev tako kompetenc laične in strokovne javnosti na področju duševnega zdravja, kot tudi povezovanje ključnih deležnikov, pripravili nabor primerov dobre prakse iz slovenskih občin in tujine ter prispevali k pripravi vsebine destigmatizacijske kampanje, prilagojene populaciji starejših odraslih. Vključenost starejših se bo spodbujala tudi s svežimi, sodobnimi pristopi (predpisovanje kulture, sodelovanje s knjižnicami, ambasadorji..)

Sklepne ugotovitve: Glede na poslabšanje kazalnikov duševnega zdravja starejših odraslih ter dosedanje izkušnje in poudarke stroke, potrebujemo prilagojene akcijske načrte, ki bodo bolj vključevali in povezovali vse ključne ciljne skupine: starejše odrasle, ključne deležnike, proaktivno in opolnomočeno lokalno skupnost ter bolj ozaveščeno širšo javnost o potrebah starejših. IDS za krepitev duševnega zdravja starejših odraslih je, ob podpori Medresorske skupine za duševno zdravje Ministrstva za zdravje in v tesni povezavi z obstoječimi mrežami, lahko trajnostna širša platforma za pripravo predlogov za ukrepanje, saj se pogoji za boljše duševno zdravje starejših odraslih umeščajo v različne sektorje družbe tako na lokalni kot na državni ravni.

Ključne besede: starejši odrasli, promocija duševnega zdravja, akcijski načrt

How to strengthen the mental health of elderly citizens in the slovenian area?

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Introduction and purpose: The elderly are a distinctly heterogeneous group; they have big differences in dealing with various challenges. With lower health (and digital) literacy and higher social exclusion and loneliness, there is also stigma and discrimination and a high risk of poverty after retirement. Mental health is threatened by the silent epidemic of dementia, the rise of depressive disorder and violence. Although the need for long-term care and the shortage of personnel for the elderly population are still at the forefront of politics and the public, it is essential to emphasize the protective factors of mental health and the positive aspects of aging and the elderly, which will improve their motivation for inclusion, and thus better accessibility to assistance programs.

Content presentation: within the Mental Health Action Plan (National Programme for Mental Health 2018-2028), at the initiative of the Interdisciplinary Working Group (IWG), we held events in the local community: “Open Door Day for Seniors” and “Longevity Society Fair”. We prepared a report on the activities carried out as an incentive to those involved and other municipalities. Materials for the lay and professional population were prepared and widely disseminated. The National Conference indicated further activities based on the needs of the elderly. The Action plan for the period 2024-2028 (while strengthening the IWG with new members) foresees a more intensive incentive for the proactive work of local communities and the creation of binding strategies of municipal councils, further intensive information and awareness of the elderly through professional and social events, and the establishment of accessible info-spots. Within IWG, we will support the strengthening of the competencies of the lay and professional public in the field of mental health, as well as the integration of key stakeholders, prepare a set of examples of good practice from Slovenian municipalities and abroad, and contribute to the destigmatization campaign adapted to the elderly population. The involvement of the elderly will also be encouraged with fresh, modern approaches (prescribing culture, participation of libraries, ambassadors...).

Conclusions: Considering the deterioration of mental health indicators of the elderly and the current experience and emphasis of the experts, we need customized action plans that will be more inclusive and connect all key target groups: senior citizens, key stakeholders, a proactive and empowered local community and a more sensitized general public about the needs of the elderly. The IWG for mental health promotion in older adults close connection with existing networks, can be a sustainable broader platform for the preparation of proposals for action, as the conditions for better mental health of the elderly are placed in various sectors of society, both at the local as at the national level.

Keywords: elderly, mental health promotion, action plan

Napovedovalci in razširjenost sindroma izgorelosti pri medicinskih sestrah edukatorkah

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Uvod: Sindrom izgorelosti na delovnem mestu je opredeljen kot stanje čustvene izčrpanosti, depersonalizacije in zmanjšane osebne uspešnosti in izpolnjenosti. Nenehne stresne reakcije, slabi medsebojni odnosi, mobing, tesnoba pred izgubo službe ter frustracije zaradi nenehnih pritiskov nadrejenih prispevajo k razvoju sindroma izgorelosti. Vse skupaj vodi do psihičnih in fizioloških sprememb zaposlenih s posledicami razvoja depresije in organskih bolezni. Namen raziskave je bil preučiti prediktorje in razširjenost sindroma izgorelosti na delovnem mestu med medicinskimi sestrami edukatorkami ter povezavo med psihološkimi osebnostnimi značilnostmi in zadovoljstvom pri delu z lestvicami izgorelosti (izčrpanost, cinizem in strokovna učinkovitost).

Metode: Presečna raziskava je bila izvedena leta 2018 na 302 medicinskih sestrah edukatorok, ki so bile zaposlene v predšolskih ustanovah na območju Beograda. Anketiranke so prostovoljno in anonimno izpolnile spletna vprašalnika Maslach Burnout Inventory-General Survey (MBI-GS) in Big Five Plus Two Questionnaire (Big Five+) ter vprašalnik o zadovoljstvu zaposlenih. Statistična analiza je bila izvedena s programsko opremo Amos 21 in IBM SPSS Statistics 25.

Rezultati: Vzorec so bile ženske, stare 38 ($\pm 9,2$) let, s povprečno delovno dobo 11 let, večina je imela končano srednjo šolo (79,7 %). Povprečna ocena podlestvice izčrpanosti je bila 1,5 ($\pm 1,3$), zmerna do visoka stopnja izčrpanosti pa je bila ugotovljena pri 27,6 % medicinskih sester edukatorok. Povprečna ocena podlestvice za poklicno učinkovitost je bila 5,3 ($\pm 0,7$), ocene za nizko, zmerno in visoko izgorelost pa so bile zastopane pri 78,8 %, 16,1 % in 5,1 %. Povprečna ocena podlestvice za cinizem je bila 1,6 ($\pm 1,1$), večina pa je imela zmerno in visoko stopnjo izgorelosti pri delu: 56,6 % in 21,1 %. Skupno je imelo sindrom zmerne izgorelosti 251 (83,1 %) medicinskih sester edukatorok. Agresivnost, nevrotizem in negativna valenca so pozitivno korelirali z izčrpanostjo in cinizmom ($p < 0,001$). Starost in delovna doba sta pokazali pomembno pozitivno korelacijo z izčrpanostjo in cinizmom. Ugotovljena je bila tudi statistično pomembna korelacija med izčrpanostjo in cinizmom pri vseh preučevanih postavkah zadovoljstva.

Razprava in zaključki: Velik odstotek medicinskih sester edukatorok ima zmerno izražen sindrom izgorelosti na delovnem mestu, kar kaže na potrebo po preventivnem ukrepanju s ciljem obvladovanja in omilitve vpliva analiziranih prediktorjev ter izvajanju nadaljnjih študij z namenom, da se poiškat nove napovednike za oblikovanje zdravega delovnega okolja in preprečiti pojav sindroma izgorelosti na delu.

Ključne besede: medicinske sestre edukatorke, napovedovalci sindroma izgorelosti, sindrom izgorelosti, javno zdravje

Predictors and prevalence of burnout syndrome in nurse educators

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Introduction: Burnout syndrome at work is defined as a state of emotional exhaustion, depersonalization and reduced personal achievement and fulfillment. Constant stressful reactions, bad interpersonal relationships, mobbing, anxiety about losing a job, frustrations due to constant pressure from superiors contribute to the development of burnout syndrome. All together, it leads to psychological and physiological changes in employees with the consequences of developing depression and organic diseases. The aim of the study was to examine the predictors and prevalence of burnout syndrome at work among nurse educators, as well as the relationship between psychological personality characteristics and job satisfaction with burnout scales (exhaustion, cynicism and professional efficiency).

Methods: Our cross-sectional study was conducted among 302 nurse educators, employed in preschool institutions in the territory of Belgrade, in 2018. Respondents voluntarily and anonymously completed the Maslach Burnout Inventory-General Survey (MBI-GS), the Big Five Plus Two Questionnaire (Big Five+) and the Employee Satisfaction Questionnaire. Statistical analysis was performed using Amos 21 and IBM SPSS Statistics 25 software.

Results: The surveyed population was female, 38 (± 9.2) age, with an average length of service of 11 years, and the majority had completed high school (79.7%). The average score of the exhaustion subscale was 1.5 (± 1.3), and a moderate to high level of exhaustion was observed in 27.6% of nurse educators. The average score of the subscale for professional efficacy was 5.3 (± 0.7), and the scores for low, moderate and high burnout were represented in 78.8%, 16.1% and 5.1%. The average score of the subscale for cynicism was 1.6 (± 1.1), and the majority of nurse educators had moderate and high levels of burnout at work: 56.6% and 21.1%. In total, 251 (83.1%) nurse educators had moderate burnout syndrome. Aggression, neuroticism and negative valence were positively correlated with exhaustion and cynicism ($p < 0.001$). Age and length of service showed a significant positive correlation with exhaustion and cynicism. A highly statistically significant correlation was found between exhaustion and cynicism with all the satisfaction items examined.

Discussion and conclusions: A large percentage of nurse educators have a moderately pronounced burnout syndrome at work, which indicates the need to take preventive measures with the aim of controlling and mitigating the influence of the analyzed predictors, as well as conducting further studies in order to find new predictors in order to form a healthy working environment and prevent the occurrence of burnout syndrome at work.

Keywords: nurse educators, predictors of burnout syndrome, burnout syndrome, public health

Incidenca depresije pri institucionaliziranih starejših ljudeh

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Uvod: Depresija je motnja centralnega živčnega sistema, ki jo povzročajo kemične spremembe v živčnih celicah možganov. Oslabljeno duševno zdravje v starosti pomembno vpliva na kakovost življenja, depresija pa je navedena kot najpogostejša duševna motnja, ki povzroča povečanje obolevnosti in umrljivosti. Na duševno zdravje vplivajo številni dejavniki, kot so ženski spol, telesna bolezen, nezmožnost delovanja, izguba pomembnih ljudi in sprememba prebivališča, kar skupaj s pomanjkanjem socialne podpore vodi v osamljenost in socialno izolacijo, kar povzroča nagnjenost k depresivnemu stanju. Cilj raziskave je bil raziskati pojavnost depresije pri institucionaliziranih starostnikih na območju Dubrovnika.

Metode: Raziskavo, ki temelji na kvantitativni metodologiji, smo izvedli na vzorcu 86 starostnikov obeh spolov s področja mesta Dubrovnik. Vprašalnika, uporabljena v raziskavi, sta bila strukturiran vprašalnik o demografskih podatkih in vprašalnik Geriatric Depression Scale v skrajšani obliki. Kriteriji za vključitev anketirancev v raziskavo so bili starost nad 60 let in stalna institucionalizacija. Ljudje s hudo duševno boleznijo niso bili vključeni v študijo. Podatki so prikazani v absolutnih številkah in odstotkih ter grafično v obliki diagramov in korelacijskih analiz.

Rezultati: Rezultati raziskave so pokazali, da 86,04 % anketiranih ni kazalo znakov depresije. Blage znake je imelo 13,96 % anketirancev, noben anketiranec pa ni kazal hujših znakov depresije. Skupaj 88,37 % vprašanih je bilo zadovoljnih s svojim življenjem, 80,23 % pa jih je izjavilo, da so večino časa dobre volje. Kar 70,93 % anketiranih večino časa preživi zunaj doma in brez težav sprejema novosti. Rezultati raziskave kažejo, da obstaja statistično pomembna razlika glede na spol. Starejše ženske (10,47 %) pogosteje kažejo znake blage depresije kot moški (3,49 %). 81,39 % sodelujočih je izjavilo, da se večino časa počutijo srečne, čeprav so manjše razlike glede na starostno skupino. Mlajši starejši ocenjujejo, da so pogosteje srečni, kar se z leti zmanjšuje. Enak trend je zaznati tudi pri oceni kakovosti življenja, kjer jo okoli tri četrtine 65- do 69-letnikov ocenjuje kot zelo visoko. Ta delež v starejši starosti pade na tretjino.

Razprava in zaključek: Rezultati raziskave kažejo, da je največji odstotek anketirancev zadovoljnih s svojim življenjem in dobre volje, medtem ko le manjši odstotek anketirancev, večinoma žensk, kaže blažje znake depresije. Zgodnje odkrivanje in zdravljenje depresije pri starejših ljudeh izboljša kakovost njihovega življenja, socialna integracija in mreža socialne podpore pa zmanjšata občutek osamljenosti in izoliranosti ter s tem pojavnost duševnih bolezni.

Gljučne besede: starejši odrasli, depresija, kakovost življenja

Incidence of depression in institutionalized older people

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Introduction: Depression is a disorder of the central nervous system caused by chemical changes in the nerve cells of the brain. Impaired mental health in old age significantly affects quality of life, and depression is cited as the most common mental disorder causing an increase in morbidity and mortality. Mental health is affected by a number of factors such as female gender, physical illness, inability to function, loss of significant others and change of residence, which together with the lack of social support leads to loneliness and social isolation, predisposing to a depressive state. The aim of the work was to investigate the occurrence of depression in institutionalised elderly people in the Dubrovnik area.

Methods: The study, based on a quantitative methodology, was conducted with a sample of 86 elderly people of both sexes from the area of the city of Dubrovnik. The instruments used for the study were a structured questionnaire on demographic data and the Geriatric Depression Scale in abbreviated form. The criteria for inclusion of respondents in the study were age over 60 years and permanent institutionalisation. People with severe mental illness were not included in the study. The data is presented in absolute numbers and percentages as well as graphically in the form of diagrams and correlation analyses.

Results: The research results showed that 86.04% of respondents showed no signs of depression. Mild signs were present in 13.96% of the respondents and not a single respondent showed severe signs of depression. A total of 88.37% of respondents were satisfied with their lives and 80.23% stated that they were in a good mood most of the time. A total of 70.93% of respondents spend most of their time outside the home and have no difficulty accepting new things. The research results show that there is a statistically significant difference in terms of gender. Older women (10.47%) are more likely to show signs of mild depression than men (3.49%). 81.39% of participants stated that they feel happy most of the time, although there are smaller differences in terms of age group. Younger older people estimate that they are happy more often, which decreases with age. The same trend can be seen in the assessment of quality of life, where around three quarters of 65- to 69-year-olds rate this as very high. This proportion drops to a third in older age.

Discussion and conclusion: The research results show that the largest percentage of respondents are satisfied with their lives and in a good mood, while only a smaller percentage of respondents, mostly female, show milder signs of depression. Early detection and treatment of depression in older people improves their quality of life, while social integration and a social support network reduce the feeling of loneliness and isolation and thus the incidence of mental illness.

Keywords: older people, depression, quality of life

Sekcija/Section

Izzivi na področju ergonomije, gibalne (ne)aktivnosti in sedentarnega vedenja delovno aktivnih in starejših odraslih

Challenges in human factors, physical (in)activity and sedentary behaviour among working-age and older adults

Vabljeni predavanje

Umeščanje 24-urnega gibalnega vedenja kot determinante zdravja v slovenski prostor

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Izhodišča in namen: Telesna dejavnost, sedentarno vedenje in spanje (tj. 24-urno gibalno vedenje) pomembno vplivajo na zdravje in dobro počutje. Zavedanje o njihovi soodvisnosti je nedavno vodilo do spoznanja, da jih je smotno preučevati in naslavljati v skupku. Namen te predstavitve je predstaviti naš aktualni projekt z naslovom »Umeščanje načela 24-urnega gibalnega vedenja kot determinantne zdravja v slovenski prostor (GIB24)«.

Predstavitve projekta: Namen projekta GIB24, ki ga financirata Javna agencija za znanstvenoraziskovalno in inovacijsko dejavnost RS in Ministrstvo za zdravje RS, je umestiti 24-urno gibalno vedenje kot determinanto zdravja v slovenski prostor. Cilji projekta so (i) oblikovati slovenske smernice za 24-urno gibalno vedenje odraslih ob uporabi uveljavljene metodologije GRADE-ADOLEPMENT; (ii) preoblikovali sklop vprašanj znotraj anketnega vprašalnika za populacijsko spremljanje NIJZ – Z zdravjem povezan vedenjski slog na način, da bo omogočena ocena gibalnega vedenja preko celotnega dne; (iii) preveriti razumljivost, ponovljivost in veljavnost novega sklopa vprašanj za vrednotenje 24-urnega gibalnega vedenja; (iv) umestiti nov sklop vprašanj v nacionalno raziskavo NIJZ – Z zdravjem povezan vedenjski slog 2024 ter oceniti velikost problematike nezdravega 24-urnega gibalnega vedenja pri odraslih prebivalcih Slovenije; (v) umestiti vrednotenje 24-urnega gibalnega vedenja v programe promocije zdravega življenjskega sloga na primarni ravni zdravstva; in (vi) približati 24-urno paradigmo strokovni in splošni javnosti ter dvigniti osveščenost o pomenu 24-urnega gibalnega vedenja za zdravje in dobro počutje.

Sklepne ugotovitve: Na predstavitvi bodo predstavljene zgodnje ugotovitve, ki izhajajo iz projektnih aktivnosti. Med drugim bo predstavljen osnutek Slovenskih smernic za 24-urno gibalno vedenje odraslih. Projekt GIB24 bo položil temelje integrativnemu spremljanju telesne dejavnosti, sedentarnega vedenja in spanja ter promociji zdravega 24-urnega gibalnega vedenja v slovenskem okolju. Na dokazih temelječe ugotovitve, ki bodo izhajale iz tega projekta, bodo lahko služile kot podlaga za pripravo razvojnih politik javnega interesa na področju 24-urnega gibalnega vedenja za javno zdravje.

Ključne besede: smernice za 24-urno gibalno vedenje; telesna dejavnost; spanje; populacijsko spremljanje; merilnik gibanja

Invited lecture

Implementing 24-hour movement behaviours as a determinant of health into the Slovenian environment

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Background and purpose: Physical activity, sedentary behaviour, and sleep (i.e. 24-hour movement behaviours) have an important impact on health and well-being. Awareness of their co-dependence has recently led to the recognition that it is sound to examine and address them in combination. The purpose of this presentation is to introduce our ongoing project “Implementing the concept of 24-hour movement behaviours as a determinant of health into the Slovenian environment (GIB24)”.

Project presentation: The purpose of the project GIB24 that is funded by the Slovenian Research and Innovation Agency and Ministry of Health from Republic of Slovenia, is to implement 24-hour movement behaviours as a determinant of health into the Slovenian environment. The objectives of the project are: (i) to develop Slovenian 24-hour movement guidelines for adults following the established GRADE-ADOLPMENT methodology; (ii) to adapt a set of questions from the national health survey NIJZ – *Health-related behaviours in the Slovenian population* to allow assessment of movement behaviours across the whole day; (iii) to conduct cognitive interviewing and to establish test-retest reliability and validity of a new set of questions for assessment of 24-hour movement behaviours; (iv) to implement this new set of questions into the national survey NIJZ – *Health-related behaviours in the Slovenian population 2024* and to estimate the prevalence of an unhealthy 24-hour movement behaviours in the Slovenian adult population; (v) to implement assessment of a 24-hour movement behaviours in preventive programmes at the primary health care level; and (vi) to introduce the 24-hour movement paradigm to the professional and general public and to raise awareness on the importance of 24-hour movement behaviours for health and well-being.

Conclusions: This presentation will include early findings from the project activities. Among others, it will include a draft of the Slovenian 24-hour movement behaviours guidelines for adults. The project GIB24 will lay the foundations for integrative monitoring of physical activity, sedentary behaviour, and sleep, and for the promotion of a healthy 24-hour movement behaviours in Slovenian environment. The evidence-based findings of this project are anticipated to inform future policies of public interest related to movement behaviours for public health.

Keywords: 24-hour movement guidelines; physical activity; sleep; population monitoring; activity monitor

Evaluacija znanja študentov o paliativni oskrbi

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Uvod: Vse več je bolnikov v paliativni oskrbi zaradi boljše oskrbe bolnikov, ki boleha-
jo za kroničnimi boleznimi in rakom. Fizioterapevti in delovni terapevti so nepogrešljivi
člani tima paliativne oskrbe. Triletni učni načrt na oddelkih za fizioterapijo in delov-
no terapijo na univerzi ponuja več predmetov, ki zajemajo osnovna znanja o paliativni
oskrbi. Namen študije je ugotoviti, koliko so študenti fizioterapije in delovne terapije
seznanjeni s paliativno oskrbo in ali imajo različno raven znanja na tem področju. Do-
ločen bo tudi način, kako študenti fizioterapije in delovne terapije pridobivajo dodatna
znanja o tej temi in spoznavao paliativno oskrbo.

Metode: V raziskavi je sodelovalo 136 študentov dodiplomskega študijskega progra-
ma delovne terapije in 138 študentov dodiplomskega študijskega programa fiziotera-
pije iz Univerzi za uporabne zdravstvene vede v Zagrebu. Vsi anketiranci so izpolnje-
vali online vprašalnik o znanju paliativne oskrbe. Vprašalnik je bil izdelan na platformi
Google Forms.

Rezultati: Pričakujemo, da bodo rezultati dali jasno predstavo o ravni znanja študentov
fizioterapije in delovne terapije vseh treh letnikov študija o paliativni oskrbi. Rezultati
študije so pokazali, da imajo študentje fizioterapije in delovne terapije podobno zna-
nje o paliativni oskrbi. Sicer se je med študenti fizioterapije in delovne terapija pokaza-
la majhna razlika v znanju, ki pa ni bila statistično značilna.

Zaključek: Rezultati te študije bi lahko ponudili nove ideje glede formalnega in nefor-
malnega usposabljanja zdravstvenih delavcev, predvsem fizioterapevtov in delovnih te-
rapevtov, z namenom izboljšanja kakovosti paliativne oskrbe in posledično višje kako-
vosti življenja pacientov v paliativni oskrbi.

Ključne besede: študenti, fizioterapija, delovna terapija, paliativna oskrba

Evaluation of student knowledge of palliative care

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Introduction: There has been an increase in the number of patients in palliative care due to better care for patients suffering from chronic diseases and cancer. Physiotherapists and occupational therapists are indispensable members of the palliative care team. The three-year curriculum at the Physiotherapy and Occupational Therapy Departments at university provides several courses covering basic knowledge of palliative care. The aim of this study is to establish how familiar physiotherapy and occupational therapy students are with palliative care and if they have different levels of knowledge in this area. The way in which physiotherapy and occupational therapy students gain additional knowledge of this topic and learn about palliative care will also be determined.

Methods: 136 undergraduate occupational therapy students (OT) and 138 undergraduate physiotherapy students (PT) at the University of Applied Health Sciences in Zagreb participated in this study. All the respondents filled in an online questionnaire about their knowledge of palliative care, which was created and made accessible on the Google Forms platform.

Results: We expect that the results will provide a clear idea of the level of knowledge physiotherapy and occupational therapy students of all three years of study have about palliative care. The results of this study show similar levels of knowledge in physiotherapy and occupational therapy students. The presented results indicate a small difference between the two study groups (PT and OT), but it is not statistically significant.

Conclusion: Results of this study could provide new ideas regarding formal and informal training of healthcare professionals, primarily physiotherapists and occupational therapists, in order to improve the quality of palliative care resulting in a higher quality of life of patients in palliative care.

Keywords: students, physiotherapy, occupational therapy, palliative care

Izboljšanje trajnostne mobilnosti v Sloveniji: kolesarske pobude za delovno sposobne odrasle

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Uvod: Vsakodnevna vožnja v službo in iz službe predstavlja velik izziv v Sloveniji, kar spodbuja raziskovanje alternativnih načinov prevoza kot je kolesarjenje. Medtem ko kolesarjenje ponuja različne prednosti, pa ovire, kot sta varno parkiranje in odpornost na vremenske razmere, ostajajo pereči problem med prebivalstvom. Slovenija s sredstvi za reformo trajnostne mobilnosti zaostaja za sosednjo Avstrijo, zaradi česar so potrebni učinkoviti ukrepi politik. Na drugi strani Nizozemske pobude poudarjajo strateško načrtovanje in razvoj infrastrukture in komuniciranja ter lahko ponujajo dragoceno smernico za prehod prebivalcev Slovenije v trajno dnevno mobilnost.

Metode: Ta študija uporablja analizo časovnih vrst od leta 1997 do 2021 in intervjuje, opravljene marca 2024 s predstavniki nizozemske vlade. Ti viri dajejo informacije o pregledu trenutnih vzorcev mobilnosti in prihodnjih perspektiv, zlasti v zvezi s kolesarjenjem v in iz službe. Ugotovitve iz nizozemskih strategij so primerjane s slovenskimi podatki za identifikacijo učinkovitih ukrepov za spodbujanje trajnostne mobilnosti.

Rezultati: Analiza razkriva neučinkovitost ukrepov v Sloveniji, kar dokazuje naraščanje uporabe avtomobilov ob istočasnem upadanju uporabe koles. Dejavniki, kot so cene goriva in razpoložljivost javnega prevoza, pomembno vplivajo na izbiro prevoza. Nizozemske pobude dajejo prednost varnosti kolesarjev in mobilnosti pešcev ter poudarjajo področja, ki jih je treba izboljšati. Izpostavljen je pomen strateškega načrtovanja, strateške komunikacije med javnostjo in prebivalci uporabnikov javnih dobrin ter načrtov oz. shem za prevoz na delo za namen razvoja trajnostnih vsakodnevnih praks mobilnosti med delovno sposobnimi odraslimi.

Razprava in zaključki: Primerjava z nizozemskimi strategijami poudarja potrebo po celovitih pristopih, ki vključujejo izboljšave infrastrukture in uporabo mehkih ukrepov. Kratkoročni in srednjeročni posegi izpostavljajo razvoj infrastrukture. Spodbude za delodajalce, kot so kolesarska parkirišča in subvencije za trajnostni prevoz na delo, igrajo ključno vlogo pri podpiranju trajnostnih praks prevoza med delovno sposobnimi odraslimi.

Uspeh Nizozemske pri spodbujanju kolesarjenja poudarja pomen sodelovanja na več ravneh in v celovitih strategijah. Učinkovit politični konsenz je nujen za doseganje ciljev trajnostne mobilnosti v Sloveniji. Slovenija bi morala po zgledu nizozemskih pobud dati prednost strateškemu načrtovanju prevozov na delo, razvoju infrastrukture in mehkim ukrepom za preoblikovanje kulture mobilnosti in spodbujanju trajnostnih praks prevozov na delo s širšimi posledicami ne le za promet, ampak tudi za nekatere druge politike, kot sta športno-rekreacijska in zdravstvena politika.

Ključne besede: trajnost, kolesa, Slovenija, prevoz na delo, delovno sposobni odrasli

Enhancing Sustainable Mobility: Insights from Cycling Initiatives for Working-Age Adults in Slovenia

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Introduction: Daily commuting poses significant challenges in Slovenia, prompting the exploration of alternative modes such as cycling. While cycling offers various benefits, obstacles such as secure parking and weather resilience persist—Slovenia’s allocation for sustainable mobility reform trails behind neighbouring Austria, necessitating effective policy interventions. Dutch initiatives emphasise strategic planning and infrastructure development, offering valuable insights for Slovenia’s mobility transition.

Methods: This study utilises time-series data analysis spanning 1997 to 2021 and interviews conducted in March 2024 with Dutch government representatives. The aforementioned sources underpin current mobility patterns and future perspectives, particularly regarding cycling for daily commuting. Insights from Dutch strategies are juxtaposed with Slovenian data to identify effective measures for sustainable mobility promotion.

Results: Analysis reveals ineffective measures in Slovenia, evidenced by increasing car usage amidst declining bicycle utilisation. Factors such as fuel prices and public transport availability significantly influence transportation choices. Dutch initiatives prioritise cyclist safety and pedestrian mobility, highlighting areas for improvement. Insights underscore the importance of strategic planning, public-citizenship communication and commuting plans to develop sustainable daily mobility practices among working-age adults.

Discussion and conclusions: Comparison with Dutch strategies highlights the need for comprehensive approaches encompassing infrastructure improvements and soft measures. Short- and medium-term interventions complement long-term infrastructure developments. Employer incentives, such as bicycle facilities and transportation subsidies, support sustainable commuting practices among working-age adults.

The Netherlands’ success in promoting cycling underscores the importance of multi-level collaboration and comprehensive strategies. Effective policy interventions are imperative for achieving sustainable mobility goals in Slovenia. Emulating Dutch initiatives, Slovenia needs to prioritise strategic commuting planning, infrastructure development, and soft measures to reshape mobility culture and foster sustainable commuting practices with broader implications for transportation and other policies such as in sport-recreational-health areas.

Keywords: sustainability, bikes, Slovenia, commuting, working-age adults

Povezanost med 24-urnim gibalnim vedenjem in gibalnimi sposobnostmi starejših odraslih

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Uvod: Živimo v svetu, v katerem se delež starejšega prebivalstva neprestano povečuje kar prinaša številne izzive za našo družbo. Med starejšimi odraslimi je zaznan porast telesne nedejavnosti in prekomernega sedentarnega vedenja, kar pospešuje procese staranja posameznika, negativno vpliva na njihove gibalne in kognitivne sposobnosti ter poslabša kakovost življenja in poveča tveganje za smrt. Kot družba se moramo s staranjem soočiti proaktivno, kar vključuje sprejemanje zdravih življenjskih navad, kot so redna telesna dejavnost, uravnotežena prehrana, ureditev spanja in izogibanje škodljivim dejavnikom. Razumevanje povezav med telesno dejavnostjo, sedentarnim vedenjem in gibalnimi sposobnostmi igra pomembno vlogo pri oblikovanju učinkovitih pristopov k ohranjanju in krepitvi zdravja v poznejših življenjskih obdobjih. Namen raziskave je ovrednotiti povezanost med 24-urnim gibalnim vedenjem in gibalnimi sposobnostmi starejših odraslih.

Metode: V raziskavo smo vključili 30 starejših odraslih starosti 65 let ali več, ki so bili sposobni samostojne hoje ali s pomočjo pripomočka, ki so obiskovali Center dnevnih aktivnosti za starejše Ljubljana. Preiskovanci so sprva izpolnili vprašalnik o spanju, sedenju in telesni dejavnosti, nato je sledila izvedba testov gibalnih sposobnosti. Povezanost med spremenljivkami smo ovrednotili s Pearsonovim koeficientom povezanosti in s Spearmanovim korelacijskim koeficientom v primeru nenormalno porazdeljenih spremenljivk. Stopnjo značilnosti smo sprejeli pri $\alpha < 0,05$.

Rezultati: Večina preiskovancev (90,0%) je dosegala priporočila za telesno dejavnost Svetovne zdravstvene organizacije. Skoraj polovica (46,7%) preiskovancev je dosegala smernice za telesno dejavnost in izvajala vadbo za krepitev večjih mišičnih skupin. Kanadske smernice je doseglo 70,0% preiskovancev, od katerih je 83,3% dosegalo priporočeno količino spanja (več kot 7 ur na dan) in 80,0% ni presegalo 8 ur sedentarnega vedenja na dan. Analiza povezanosti je pokazala nizko pozitivno povezanost med spanjem in testom 9 zatičev tako z dominantno kot z nedominantno roko. Pri ženskah smo našli zmerno negativno povezanost med sedentarnim vedenjem in 6-minutnim testom hoje. Drugih povezanosti med nivoji telesne dejavnosti in sedentarnim vedenjem z izbranimi spremenljivkami nismo našli.

Razprava in zaključki: Naša raziskava je odprla vpogled v kompleksno povezanost med 24-urnim gibalnim vedenjem in gibalnimi sposobnostmi starejših odraslih. Nakazuje se, da imajo osebe, ki manj sedijo, boljše aerobno pripravljenost in da vadba za moč ugodno vpliva na moč zgornjih okončin in hitrost hoje. Rezultati so obenem pokazali, da je starost močan dejavnik, ki negativno vpliva na gibalne sposobnosti starejših odraslih.

Ključne besede: starejši odrasli, telesna nedejavnost, sedentarno vedenje, spanje, gibalne sposobnosti

Association between 24-hour movement behavior and exercise capacity in older adults

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Introduction: We live in a world where the share of older adults is constantly increasing and bringing numerous challenges to our society. Among older adults, there is a noticeable increase in physical inactivity and excessive sedentary behavior, which accelerates the aging processes, negatively impacts their physical and cognitive abilities, deteriorates their quality of life, and increases the risk of mortality. As a society, we must proactively address aging, which includes adopting healthy lifestyle habits such as regular physical activity, balanced diet, managing sleep, and avoiding harmful factors. Understanding the connections between physical activity, sedentary behavior, and physical abilities plays a crucial role in developing effective approaches to preserving and enhancing health in later life stages. The aim of the study is to determine the correlation between 24-hour movement behavior and motor skills of older adults.

Methods: The study included 30 older adults aged 65 years or older, capable of independent walking or with the assistance of an aid, who attended the Day activity center for older adults in Ljubljana. Participants initially completed an online questionnaire of sleep, sitting, and physical activity and underwent a battery of tests to assess their motor skills. The association between variables was evaluated using Pearson's correlation coefficient and Spearman's correlation coefficient in case of non-normally distributed variables. The significance level was accepted at $\alpha < 0.05$.

Results: The majority of participants (90.0%) met the physical activity recommendations of the World Health Organization. Nearly half (46.7%) of the participants met the physical activity guidelines and engaged in exercises to strengthen major muscle groups. Canadian guidelines were met by 70.0% of the participants, of whom 83.3% achieved the recommended amount of sleep (more than 7 hours per day), and 80.0% did not exceed 8 hours of sedentary behavior per day. The analysis of the association showed a low positive correlation between sleep and the 9-Hole peg test with both dominant and non-dominant hand. In women, we found a moderate negative correlation between sedentary behavior and the 6-minute walking test. No other associations between levels of physical activity and sedentary behavior with selected variables were found.

Discussion and Conclusion: Our study provided insight into the complex relationship between 24-hour movement behavior and motor skills of older adults. It suggests that individuals who sit less have better aerobic fitness and that strength training positively influences the strength of upper limbs and walking speed. The results also showed that age is a strong factor negatively affecting the physical abilities of older adults.

Keywords: older adults, physical inactivity, sedentary behavior, sleep, motor skills

Nekateri vidiki življenjskega sloga bodočih vzgojiteljev

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Uvod: Poklic vzgojitelja predšolskih otrok je fizično in psihično zahteven. Fizično zato, ker vzgojitelj praviloma večino dneva preživi z več kot 20 otroki v majhnem in relativno hrupnem prostoru, pri čemer mora otroke pogosto dvigovati, se k njim sklanjati, se zadrževati v zanj neoptimalnih držah ipd. ter psihično, ker mora ob tem izvajati pedagoško in administrativno delo, komunicirati s starši, usklajevati delo z drugimi strokovnimi delavci in se ob tem učinkovito soočiti s stresom. Zato je pomembno, da vzgojitelji zgodaj začnejo udejanjati zdrav načina življenja, ki pomembno prispeva k ohranitvi zdravja. Med dejavniki, ki vplivajo na zdravje, so pogosto izpostavljeni prehrana, telesna dejavnost, spanje, konstantnost v telesni teži, spretnost v soočanju s stresom ipd. Oblikovanje življenjskega sloga se začne že v otroštvu, pomembno pa se oblikuje tudi v času mladostništva in prehoda v odraslost, ko so bodoči vzgojitelji na fakulteti. V prispevku zato analiziramo izbrane vidike življenjskega sloga bodočih slovenskih vzgojiteljev s ciljem preučiti trenutno stanje, nasloviti morebitne pomanjkljivosti in poiskati priložnosti za ustrezno podporo.

Metode: V vzorec smo zajeli 154 študentov 3. letnika Predšolske vzgoje Univerz v Koprju, Mariboru in Ljubljani, od tega 81 rednih in 73 izrednih. S pomočjo anketnega vprašalnika (prirejenega po Maučec, 2017; Zdravje slovenskih študentov, 2012), ki je obsegal 39 vprašanj, ki so predstavljali izbrane kazalnike življenjskega sloga, smo pridobili podatke o načinih dnevnih migracije študentov, vzdrževanju telesne mase, načinih prehranjevanja, času spanja, nekaterih razvad, času, pogostosti in intenzivnosti telesnih dejavnosti ter mnenja o njihovem znanju in resničnosti udejanjanja nekaterih vidikov zdravega načina življenja.

Rezultati: Ugotovili smo, da 24 % študentov živi do 2 km od fakultete, 10,4 % pa od 2 do 5 km. Drugi živijo dlje. Vsi, ki živijo dlje kot 2 km, se na fakulteto pripeljejo z avtobusom ali avtom. 75,3 % študentov presedi na dan več kot 4 ure. 35,7 % študentov je v transportu do ene ure, 31,2 % jih je v transportu 2 uri, 33,1 % pa več kot 3 ure, od tega je 75 % vseh v transportu pasivnih. 15,6 % študentov spi manj kot 6 ur, 24 % slabo ali zelo slabo pozna načine soočanja s stresom, 33,1 % študentov je premalo telesno dejavnih za ohranjanje zdravja. Med študijem se v povprečju zredi za 2 kg. Razlika med poznavanjem kazalnikov zdravega življenjskega sloga in dejanskim stanjem pa kaže na neznačilno negativno diskrepanco.

Razprava in zaključki: Menimo, da trenutno stanje kaže na manko ozaveščenosti študentov o pomenu zdravega življenjskega sloga, še predvsem v kazalnikih spopadanja s stresom, ustrezne telesne dejavnosti in izbire aktivnejšega transporta. Diskrepanca med znanjem in udejanjenjem pa nakazuje na potrebo po iskanju vzrokov za diskrepanco, pripravo strategij za dvig motivacije, dopolnitev predmetov z vsebinami zdravega življenjskega sloga, prilagoditev urnikov izbirnih predmetov športa na fakultetah v ugodne termine, izvajanje gibalnih odmorov in minut za zdravje.

Ključne besede: bodoči vzgojitelji, kazalniki življenjskega sloga, načini podpore

Some aspects of the lifestyle of future educators

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Introduction: The profession of preschool teacher is physically and mentally demanding. Physically, because they usually spend most of the day with more than 20 children in a small and relatively noisy room, where they often have to lift the children, bend down to them, hold them in suboptimal postures, etc., and mentally, because they have to perform pedagogical and administrative work, communicate with parents, coordinate with other professionals and deal effectively with stress. It is therefore important for preschool teachers to start early to adopt a healthy lifestyle, which makes an important contribution to maintaining good health. Factors that influence health often include diet, physical activity, sleep, weight stability, coping strategies, etc. Lifestyle shaping begins in childhood, but is also important in adolescence and the transition to adulthood, when future preschool teachers are at faculty. This paper therefore analyses selected aspects of the lifestyles of future Slovenian preschool teachers with the aim of examining the current situation, addressing potential gaps and identifying opportunities for appropriate support.

Methods: 154 third-year students of Preschool Education at the Universities of Koper, Maribor and Ljubljana were included in the sample, 81 full-time and 73 part-time. A questionnaire (adapted from Maučec, 2017; Health of Slovenian Students, 2012) containing 39 questions on selected lifestyle indicators was used to collect data on students' daily migration patterns, weight maintenance, eating habits, sleep duration, some habits, time, frequency and intensity of physical activities, as well as their opinions on their knowledge and actual implementation of some aspects of a healthy lifestyle.

Results: We found that 24% of students live within 2 km of the faculty and 10.4% live between 2 and 5 km. Others live further away. All those who live further than 2 km away travel to the faculty by bus or car. 75.3% of students spend more than 4 hours a day on the road. 35.7% of students are on the road for up to 1 hour, 31.2% are on the road for 2 hours, 33.1% are on the road for more than 3 hours, 75% of all students are passive in traffic. 15.6% of students sleep less than 6 hours, 24% have poor or very poor knowledge of how to deal with stress, 33.1% of students are not physically active enough to stay healthy. 15.6% of students sleep less than 6 hours, 24% have poor or very poor knowledge of how to manage stress, 33.1% of students are not physically active enough to stay healthy. The average body weight increases by almost 2 kg over three years. The difference between knowledge of healthy lifestyle indicators and the actual situation shows a non-significant negative discrepancy.

Discussion and conclusions: We believe that the current situation reflects a lack of awareness among students of the importance of healthy lifestyles, particularly in relation to the indicators of stress management, appropriate physical activity and choosing more active modes of transportation. The discrepancy between knowledge and implementation shows that it is necessary to identify the causes of this discrepancy, develop strategies to increase motivation, include healthy lifestyle content in courses, adapt the schedules of electives at faculties to favourable dates, introduce physical activity breaks and health protocols.

Keywords: preschool teachers, promotion methods, lifestyle indicators

Preprečevanje z delom povezanih mišično-skeletnih obolenj med zaposlenimi v zdravstvu in socialnem varstvu

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Izhodišča in namen: Mišično-skeletna obolenja so najpogostejša zdravstvena težava, povezana z delom. Med najbolj ogroženimi za pojav obolenj mišično-skeletnega sistema so zaposleni v zdravstvu in socialnovarstvenih ustanovah. O težavah najpogostejše poročajo medicinske sestre in negovalci. Ta obolenja vplivajo na zmanjšano sposobnost pri delu, kakovost življenja in druge nezmožnosti. So veliko stroškovno breme za posameznika, podjetja in družbo. Preprečevanje mišično-skeletnih obolenj pri delavcih in spodbujanje njihovega mišično-skeletnega zdravja je ključnega pomena, da lahko kakovostno delajo dlje. Za preprečevanje so potrebni prilagojeni in strukturirani programi, ki zaposlenim omogočajo dostop do informacij in znanja. Delovni terapevt in fizioterapevt sta strokovnjaka, ki sta zaposlena v zdravstvenih in socialnovarstvenih ustanovah. Poznata delovne razmere in sta usposobljena za področja preventivnega delovanja, ergonomije in prilagajanja okolja ter rehabilitacije. Smiselno je, da se s svojim znanjem in izkušnjami aktivno vključujeta v programe za preprečevanje z delom povezanih mišično-skeletnih obolenj.

Predstavitev vsebine: Mišično-skeletna obolenja se največkrat pojavljajo zaradi rokovanja s pacienti in opremo ter pri oskrbi pacientov. Največji dejavnik tveganja je rokovanje s pacienti, saj je oskrba sestavljena iz velikega števila fizično napornih opravil. Številne študije so se osredotočile na opredelitev najboljših preventivnih praks za zmanjšanje mišično-skeletnih obolenj, povezanih z rokovanjem s pacienti. Te študije kažejo, da so uspešnejši programi, ki vključujejo izobraževalne programe, programe telesne vadbe in telesne pripravljenosti, prilagojeno organizacijo dela ter uporabo mehanske opreme za rokovanje. Za uspešno implementacijo je ključna tudi dobra analiza delovnih razmer, ki so v zdravstvenih in socialnovarstvenih ustanovah zelo specifične. Delovni terapevt in fizioterapevt sta zdravstvena delavca, ki s svojim znanjem in izkušnjami sodelujeta pri vseh fazah preventivnih programov. Z znanji, ki jih imata na področju rehabilitacije, lahko dobro opredelita zahteve in posebnosti pacientov. Delovni terapevt lahko s svojimi znanji vpliva na uspešnost in participacijo zaposlenih pri delovnih nalogah na fizičnem, psihološkem in kognitivnem področju zaposlenega in na okolje, v katerem delo poteka. Fizioterapevt pa lahko prispeva s svojim znanjem na področju preprečevanja poškodb, izboljšanja telesne zmogljivosti in spodbujanja k bolj zdravemu življenjskemu slogu. Oba strokovnjaka sta odlično opremljena z znanjem na področju ergonomije in izobraževanja. Njuna vloga je zato pri uspešnem izvajanju preventivnih programov vedno bolj prepoznavna.

Sklepne ugotovitve: Preventivni program za preprečevanje z delom povezanih mišično-skeletnih obolenj v zdravstvenih in socialnovarstvenih ustanovah mora upoštevati posebnosti zaposlenih in pacientov. Delovni terapevt in fizioterapevt lahko pomembno pripomoreta k uspešni implementaciji takega programa.

Ključne besede: delovni terapevt, fizioterapevt, ergonomija

Prevention of work-related musculoskeletal disorders among health and social care workers

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Background and purpose: Musculoskeletal disorders are the most common work-related health problem. Employees in the health and social care sectors are among those most at risk of developing musculoskeletal disorders. Nurses and carers most commonly report these problems. These conditions reduce the ability to work and quality of life and cause other disabilities. They are a significant cost burden for individuals, businesses and society. Preventing musculoskeletal disorders in workers and promoting their musculoskeletal health is critical for enabling them to work longer and with better quality. Prevention requires tailored and structured programmes that give employees access to information and knowledge. Occupational therapists and physiotherapists are professionals working in health and social care settings. They are familiar with working conditions and trained in preventive action, ergonomics, environmental adaptation, and rehabilitation. It is reasonable for them to actively involve their knowledge and experience in programmes to prevent work-related musculoskeletal disorders.

Content presentation: Patient handling, equipment manipulation, and patient care often cause musculoskeletal disorders. Patient handling is the most significant risk factor, as patient care involves many physically demanding tasks. Many studies have focused on identifying the best preventive practices to reduce musculoskeletal disorders associated with patient handling. These studies show that preventative programmes, including educational programmes, exercise and fitness programmes, adapted work organisation, and mechanical handling equipment, are more successful. A good analysis of the conditions, which are very specific in health and social care settings, is also crucial for successful implementation. Occupational therapists and physiotherapists are health professionals who bring their expertise and experience to all phases of prevention programmes. With their knowledge of rehabilitation, they are well-placed to identify the requirements and specificities of patients. Occupational therapists can use their skills to influence the performance and participation of employees in their work tasks in the physical, psychological and cognitive domains of the employee and the work environment. A physiotherapist can contribute with knowledge in injury prevention, improving physical performance and encouraging healthier lifestyles. Both professionals are well-equipped with knowledge in ergonomics and education. Their role in the successful implementation of prevention programmes is therefore increasingly recognised.

Conclusions: Prevention programmes for work-related musculoskeletal disorders in health and social care settings should consider the specificities of employees and patients. Occupational therapists and physiotherapists can significantly contribute to successfully implementing such programmes.

Keywords: occupational therapist, physiotherapist, ergonomics

Pomen presejanja v fizioterapiji

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Uvod: V nekaterih evropskih državah imajo pacienti pravico do samonapovitve ali pregleda brez napotitve zdravnika pri triažnemu fizioterapevtu, ki ima dodatna strokovna znanja in je sposoben naprednega kliničnega sklepanja. Triažni fizioterapevt mora biti usposobljen pravočasno prepoznavati znake in simptome resnega obolenja, ki ni živčno mišično skeletno. Proces presejanja (angl. screening) omogoča fizioterapevtu zaznavati opozorilne znake - rdeče zastavice, ki zahtevajo dodatno zdravniško pozornost. Razlog za dvom in napotitev k zdravniku specialistu je lahko tudi nepričakovan izid ali neodzivnost simptomov na fizioterapevtsko obravnavo.

Metode: Uporabljena je bila deskriptivna metoda raziskovanja z iskanjem literature v podatkovnih zbirkah PubMed in Cinahl med novembrom 2023 in marcem 2024. V pregled so bile vključene prostodostopne randomizirane kontrolirane študije in sistematični pregledni članki objavljeni po letu 2018. Iskali smo z iskalnim nizom ključnih besed ali njihove kombinacije v angleškem jeziku: direct access, physiotherapy, redflags.

Rezultati: V pregled je bilo vključenih 12 raziskav, ki so raziskovale učinke in posledice možnosti samonapovitve ali dostopa do fizioterapije brez napotitve zdravnika. Avtorji večinoma poročajo o zmanjšanju števila napotitev k zdravnikom specialistom, zmanjšanju porabe zdravil, izboljšanju pacientovega zadovoljstva z zdravstveno oskrbo in s tem zmanjšanju stroškov zdravljenja.

Razprava in zaključki: Fizioterapevt ima odgovorno nalogo v procesu zagotavljanja pacientove osnovne pravice do primerne, varne in kakovostne obravnave. Fizioterapevtsko obravnavo načrtuje na podlagi fizioterapevtskega pregleda, ki mora čimbolj jasno izključiti prisotnost resnih obolenj ali zaznati posameznike pri katerih resna obolenja še niso bila odkrita. Proces presejanja fizioterapevtom pomaga določiti stopnjo dvoma o tem ali je dotični pacient primeren za fizioterapevtsko obravnavo in izbrati najbolj učinkovit fizioterapevtski postopek.

Ključne besede: screening, rdeče zastavice, fizioterapija, fizioterapevtska diagnoza

The importance of screening in physiotherapy

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Introduction: In some European countries, patients have the right to self-referral or examination without referral from a doctor to a triage physiotherapist who has additional expertise and is capable of advanced clinical reasoning. A triage physical therapist must be trained in a timely manner to identify signs and symptoms of a serious illness other than neuromusculoskeletal disorders. The screening process allows the physiotherapist to detect warning signs – red flags that require additional medical attention. The reason for doubt and referral to a specialist doctor may also be an unexpected outcome or unresponsiveness of symptoms to physiotherapeutic treatment.

Methods: A descriptive method of literature search in the PubMed and Cinahl databases between November 2023 and March 2024 was conducted. The review included open access of randomized controlled trials and systematic reviews published since 2018. We searched using the search string of keywords or their combinations in English: direct access, physiotherapy, red flags.

Results: The review included 12 studies that investigated the effects and implications of self-referral options or access to physiotherapy without referral to a doctor. The authors mostly report a decrease in the number of referrals to specialist doctors, a decrease in drug consumption, an improvement in the patient's satisfaction with medical care, and thus a reduction in treatment costs.

Discussion and conclusions: A physical therapist has a responsible task in the process of ensuring the patient's basic right to appropriate, safe and quality treatment. Physiotherapeutic treatment is planned on the basis of a physiotherapeutic examination, which must exclude as clearly as possible the presence of serious illnesses or detect individuals in whom serious illnesses have not yet been detected. The screening process helps physiotherapists determine the degree of doubt about whether the patient in question is suitable for physiotherapeutic treatment and choose the most effective physiotherapeutic procedure.

Keywords: screening, red flags, physiotherapy, physiotherapeutic diagnosis

Ergonomija dela in bolečina v križu pri patronažnih sestrah v Sloveniji

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Uvod: Hiter tempo življenja in svetovne demografske in zdravstvene spremembe so povzročili naglo povečanje števila ljudi, ki se soočajo z invalidnostjo zaradi nenalezljivih bolezni. Prevladujoči vzrok invalidnosti v skupini nenalezljivih bolezni so mišično-skeletna obolenja. Na prvem mestu je že vrsto let bolečina v spodnjem delu hrbta, imenovana tudi bolečina v križu. Zato smo se v raziskavi osredotočili na pojavnost bolečine v križu pri medicinskih sestrah, zaposlenih v patronažni službi v Sloveniji, ugotavljali vpliv delovne dobe na pojavnost bolečine v križu pri le-teh ter preverjali željo patronažnih medicinskih sester v Sloveniji po dodatnem znanju in veščinah s področja ergonomije njihovega delovnega mesta.

Metode: Uporabili smo kvantitativni raziskovalni pristop. Uporabili smo metodo anketiranja ter za raziskovalni instrument uporabili anketni vprašalnik, ki je sodelujoče spraševal o bolečini v križu v času odkar delujejo na mestu patronažne sestre. V vzorec je bilo vključenih 91 medicinskih sester, od katerih jih je 90 bilo zaposlenih v patronažni dejavnosti v Sloveniji.

Rezultati: O pojavnosti bolečine v hrbtenici zaradi delovne obremenitve poroča 70 % anketirank. Ugotovili smo, da 29 (32 %) sodelujočih anketirank občuti bolečino v ledveni hrbtenici, bolečino v vratnem in prsnem delu navaja 14 anketirank (15 %). 21 (23 %) anketirank je navedlo, da se bolečine pojavljajo tako v vratnem in prsnem, kot tudi v ledvenem delu hrbtenice. 27 anketirank (30 %) ne navaja bolečin v hrbtenici. 15 % anketirank je bilo zaradi bolečine v hrbtenici kasneje tudi odsotnih z dela, skoraj vse anketiranke (87,9 %) si želijo dodatno znanje in veščine s področja ergonomije njihovega delovnega mesta.

Razprava in zaključki: Dosedanje raziskave poročajo, da se bolečina v hrbtenici med zaposlenimi zdravstvenimi delavci najpogosteje pojavlja v predelu ledvene hrbtenice oziroma v križu. Zaključimo lahko, da je pojavnost bolečine v križu povezana z odsotnostjo z dela, medtem ko delovna doba na pojavnost bolečine v križu ne vpliva. Zaradi želje anketirank po dodatnem znanju s področja ergonomije njihovega delovnega mesta, lahko sklepamo, da je potreba po uvedbi dodatnih izobraževanj in po ozaveščanju zdravstvenih delavcev o pravih tehnikah premeščanja in ergonomiji na delovnem mestu nujna.

Ključne besede: ledvena hrbtenica, patronažne medicinske sestre, ergonomija, bolečina v križu

Work ergonomics and low back pain among patronage nurses in Slovenia

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Introduction: The fast pace of life and global demographic and health changes have led to a rapid increase in the number of people experiencing disability due to non-communicable diseases. The predominant cause of disability in the noncommunicable group is musculoskeletal disorders. Lower back pain, also known as low back pain, has been the leading cause for many years. Therefore, in this thesis we focused on the prevalence of low back pain in nurses working in the patronage service in Slovenia, the influence of working years on the prevalence of low back pain in these nurses, and the desire of nurses working in the patronage service in Slovenia to acquire additional knowledge and skills in the field of ergonomics of their workplace.

Methods: We used a survey and a questionnaire as a research instrument. The sample consisted of 91 nurses working in the field of patronage nursing in Slovenia.

Results: 70% of the respondents reported back pain due to workload, with the most frequent occurrence in the lower back area. We found that 29 (32%) participating respondents experienced pain in the lumbar spine, while 14 respondents (15%) reported pain in the cervical and thoracic regions. 21 (23%) respondents stated that they experienced pain in both the cervical and thoracic regions as well as the lumbar region of the spine. 27 respondents (30%) did not report any spinal pain. 15% of the respondents had also been absent from work later due to back pain, and almost all (87.9%) of the respondents would like to gain additional knowledge and skills in ergonomics in their workplace.

Discussion: Previous studies report that spinal pain is most commonly experienced among employed healthcare workers in the lumbar spine or lower back region. We can conclude that low back pain is associated with absenteeism from work, whereas low back pain is not influenced by the length of service. The respondents' desire for additional ergonomic knowledge at their workplace suggests a need to introduce additional training and raise awareness among health professionals about correct repositioning techniques and ergonomics at the workplace.

Keywords: lumbar spine, patronage nurses, ergonomics, low back pain

Sekcija/Section

**Prehrana in zdravje delovno aktivnih
in starejših odraslih**

Nutrition and health of working-age and older adults

Vabljeno predavanje

Sistemiški pogled na obvladovanje tveganj za zdravje

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Izhodišča in namen: Pojem zdravja, vplivov na zdravje in zagotavljanje zdravstvenih potreb lahko obravnavamo iz različnih zornih kotov, bodisi kot pomen zdravja za človeka ali družbo, kot ohranjanje ali izboljševanje zdravja, ali kot človek - sistem, povezan in vključen v različne sisteme okolja. Prepoznavna in obvladovanje tveganj za zdravje omogoča pravočasno ukrepanje za preprečitev ali zmanjšanje posledic. Za razumevanje tveganj ali posledic na zdravju posameznika se je potrebno zavedati kompleksnosti človeka kot celote.

Predstavitev vsebine: Zdravje je eden od najbolj cenjenih vidikov človekovega življenja. Večinoma ga sprejemamo kot naravno danost, kot samoumevno in normalno stanje, dokler se ne pojavi bolečina, bolezen ali začutimo, da se zaradi različnih razlogov težje spopadamo z vsakdanjimi aktivnostmi, dojetjem ali prilagajanjem vplivom okolja. Iz vidika obravnavanja človeka kot sistema, ki je vključen in povezan z več sistemi v okolju, s katerimi tvori skupni sistem, je potrebno razumeti tudi dinamiko in teorijo delovanja sistemov. Živi sistemi, kot je človeško telo ali drevo ali pa neka družba niso le skupki delov, temveč nenehno rastejo in se spreminjajo, skupaj s svojimi deli. Preventivno obvladovanje možnih ali prepoznanih tveganj v proizvodnih in storitvenih procesih v industriji predstavlja enega izmed pomembnejših temeljev učinkovite sistemske organizacije. Znižuje stroške zaradi napak v proizvodnji, dviguje kakovost, povečuje zaupanje kupcev. V zdravstvu gre to počasneje. Razlogi izhajajo iz ohlapnih procesov in vlog zdravstvenega osebja ter sistemsko neučinkovitega preventivnega prepoznavanja problemov in obvladovanja tveganj. Kompleksnost medicinskih procesov, poleg pacientove specifičnosti in edinstvenosti, ponuja izgovor proti standardizaciji postopkov. Dejstvo je, da vsak človek dojema pojem zdravja na svoj način, prav tako na subjektiven način opiše bolečino ali doživlja bolezen. Odnos in zaupanje med pacientom in zdravstvenim delavcem sta ključna. Poleg tega morajo biti zagotovljeni ustrezni in zadostni viri za izvajanje vseh potrebnih aktivnosti v povezanih procesih sistema, kot so kompetentni kadri, ustrezna oprema, ustrezne operacijske dvorane, čistost zraka, sterilnost medicinskih pripomočkov, pravočasne in ustrezne informacije in drugo.

Proces prehranske oskrbe hospitaliziranega pacienta je del sistema zdravstvene oskrbe, ki zajema prepoznavo potreb pacienta glede na zdravstveno stanje in stanje prehranjenosti, pripravo ustrezne in zadostne hrane glede na predpisano dieto in obvladovanje vseh tveganj za varnost in kakovost oskrbe.

Sklepne ugotovitve: Zavedanje o koristi sistemskega pristopa za obvladovanje tveganj se iz industrije seli tudi v storitvene dejavnosti, kot je zdravstvo. Pri tem je pomembna vključenost zaposlenih, nivo ozaveščenosti o pomenu tveganj in obvladovanju letih, voditeljstvo in nenazadnje razpoložljivi in ustrezno obvladovani viri, ki zagotavljajo ustrezne pogoje za izvajanje vseh potrebnih aktivnosti v povezanih procesih sistema.

Ključne besede: sistem, obvladovanje tveganj, zdravstvo, proces prehranske oskrbe

Invited lecture

A systemic view of health risk management

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Introduction and purpose: The concept of health, impacts on health and the provision of health needs can be considered from different perspectives, either as the importance of health for a person or society, as maintaining or improving health, or as a human - a system connected and included in various environmental systems. Recognizing and managing health risks enables timely action to prevent or reduce the consequences. In order to understand the risks or consequences on an individual's health, it is necessary to be aware of the complexity of the human being as a whole.

Content presentation: Health is one of the most valued aspects of human life. We usually accept it as a natural given, as a self-evident and normal condition, until pain and illness appears or we feel that it is more difficult to cope with everyday activities, perception or adaptation to environmental influences for various reasons. From the point of view of treating man as a system that is included and connected to several systems in the environment, with which it forms a common system, it is also necessary to understand the dynamics and the theory of systems. Living systems, such as a human body or a tree or a society, are not just a collection of parts, but are constantly growing and changing, along with their parts. Preventive management of possible or identified risks in production and service processes in industry is one of the most important foundations of an effective system organization. It reduces costs due to production errors, raises quality, increases customer confidence. In health care, the introduction of this principle is being undertaken more slowly. The reasons stem from lax processes and roles of medical personnel, as well as systemically inefficient preventive problem identification and risk management. The complexity of medical processes, in addition to the patient's specificity and uniqueness, offers an excuse against the standardization of procedures. The fact is that each person perceives the concept of health in his own way. It also describes pain or experiencing illness in a subjective way.

The relationship and trust between the patient and the healthcare professional is crucial. In addition, adequate and sufficient resources must be provided for the implementation of all necessary activities in the related processes of the system, such as competent personnel, adequate equipment, adequate operating rooms, air cleanliness, sterility of medical devices, timely and relevant information, and others. The process of nutritional care of a hospitalized patient is part of the health care system, which includes identifying the patient's needs in terms of health and nutritional status, preparing adequate and sufficient food according to the prescribed diet, and managing all risks to the safety and quality of care.

Key findings: Awareness of the benefits of a systemic approach to risk management is transitioning from industry to service sectors, such as healthcare. In this context, the involvement of employees, the level of awareness of the importance of risks and their management, leadership and, last but not least, the available and properly managed resources that provide adequate conditions for the implementation of all necessary activities in the related processes of the system are crucial.

Keywords: system, risk management, healthcare, nutrition care process

Redoks stanje in dolgoživost pri vsejedih, veganih, vegetarijancih in posameznikih na nizko ogljikohidratni in visoko maščobni prehrani

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Uvod: Redoks stanje v telesu je pomemben dejavnik pri staranju in nastanku s staranjem povezanih bolezni. Poleg tega je bilo redoks stanje povezano z izražanjem sirtuina I (SIRT1), ki je neposredno povezan z dolgoživostjo, vendar pa redoks stanje in SIRT1 nista bila raziskana pri ljudeh, ki se prehranjujejo na različne načine in iz prehrane izločijo celotno skupino živil.

Metode: Prehranski vnos, serumska celokupna antioksidativna kapaciteta (TAC), antioksidativni kapaciteti vodne frakcije seruma (ACW) in ločeno lipidne frakcije seruma (ACL), razmerje $NAD^+/NADH$ (D/DH), izražanje antioksidativnih encimov katalaze, superoksid dismutaze in glutation peroksidaze ter izražanje SIRT1 so bili izmerjeni pri 88 odraslih, ki so bili vsejedi (O, n=22), vegani (V, n=23), vegetarijanci (VG, n=21) in posamezniki na nizko ogljikohidratni in visoko maščobni prehrani (LCHF, n=22). Preiskovanci so bili zdravi odrasli s stabilno telesno maso, ki so se na enak način prehranjevali vsaj 6 mesecev; prehranske skupine so bile primerljive po indeksu telesne mase, maščobni masi, pustih telesni masi, telesni dejavnosti in kajenju.

Rezultati: TAC in D/DH sta bila najvišja pri V, sledili so O ter LCHF, in najnižja pri VG, kjer sta bila statistično značilno nižja kot pri V. D/DH je bil pozitivno povezan s celokupno kapaciteto absorpcije kisikovih radikalov zaužite hrane in kakovostjo prehrane, ocenjeno z indeksom zdrave prehrane (ang. Healthy Eating Indeks). ACW in ACL se med prehranskimi skupinami nista razlikovali, prav tako se izražanje katalaze, superoksid dismutaze in glutation peroksidaze med prehranskimi skupinami ni razlikovalo. SIRT1 se kljub visokim razlikam v povprečni vrednosti (od najvišjega do najnižjega izražanja so si sledili O, V, VG in LCHF) ni značilno razlikoval med skupinami, bil pa je pozitivno povezan s kakovostjo prehrane. Hierarhični regresijski model je pokazal spol, starost in izražanje katalaze in superoksid dismutaze kot značilne prediktorje TAC ter spol in kakovost prehrane kot značilna prediktorja D/DH. TAC je bil višji pri moških, medtem ko je bil D/DH višji pri ženskah. Pri moških je bila višja ACW in višje izražanje katalaze in superoksid dismutaze.

Razprava in zaključki: Redoks stanje v telesu je rezultat delovanja več dejavnikov, tako endogenih kot eksogenih. Študija je pokazala, da imajo V boljše redoks stanje v telesu, najverjetneje prav zaradi višje kakovosti prehrane in boljših izbir živil znotraj prehranjevalnega načina. Kakovost prehrane se je izkazala kot pomemben dejavnik pri redoks stanju in pri nivoju SIRT1, ki je neposredno povezan z zdravim staranjem in dolgoživostjo. Poleg tega je študija pokazala pomembne razlike med spoloma, nadaljnje analize so potrebne, da bi lahko podrobneje pojasnili povezavo med SIRT1 in redoks stanjem v telesu.

Ključne besede: antioksidativna kapaciteta seruma, razmerje $NAD^+/NADH$, sirtuin I, kakovost prehrane

Redox state and longevity in omnivore, vegan, vegetarian and low carbohydrate high fat diet

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Introduction: Redox state and longevity are tightly connected, with redox state being associated with aging and the development of age-related diseases. Additionally, redox state has been associated with the expression of sirtuin I (SIRT1), which is considered a marker of longevity. However, the comparison of redox state and SIRT1 among dietary groups, that exclude whole food groups from their diet, has not yet been investigated.

Methods: Dietary intake, serum total antioxidative capacity (TAC), serum antioxidative capacity of water-soluble compounds (ACW), serum antioxidative capacity of lipid-soluble compounds (ACL), NAD^+/NADH ratio (D/DH), and expression of antioxidative enzymes catalase, superoxide dismutase and glutathione peroxidase, as well as SIRT1 were measured in 88 healthy subjects with stable body mass and consistent dietary pattern for at least 6 months. The subjects were omnivores (O, n=22), vegans (V, n=23), vegetarians (VG, n=21) and individuals following low carbohydrate high fat diet (LCHF, n=22). The dietary groups were homogeneous in terms of BMI, fat mass, fat-free mass, physical activity and smoking.

Results: TAC and D/DH were highest in V, followed by O, LCHF and VG, with significant difference compared to V. D/DH was positively associated with total oxidative radical absorbance capacity of ingested food and with diet quality assessed with Healthy Eating Index. ACW and ACL did not differ between dietary groups, nor did the expression of catalase, superoxide dismutase and glutathione peroxidase. Although there was a noticeable difference in mean values (with expression levels in the order O, V, VG, and LCHF), SIRT1 did not differ significantly between groups. SIRT1 expression was positively associated with diet quality. The hierarchical regression model identified gender, age and expression of catalase and superoxide dismutase as significant predictors of TAC, while gender and diet quality were significant predictors of D/DH. TAC was higher in men, whereas D/DH was higher in women. Additionally, ACW and expression of catalase and superoxide dismutase were higher in men.

Discussion and conclusions: The body's redox state is a multifactorial marker influenced by both endogenous and exogenous factors. Our study demonstrated better redox state in V, which may be due to better diet quality and food choices within their dietary pattern. Diet quality was found to be an important factor for both redox state and SIRT1, which is independently associated with healthy ageing and longevity. Our results also revealed significant differences between genders, and further analyses are needed to clarify the expression of SIRT1 and its association with the redox state of the body.

Keywords: serum antioxidative capacity, NAD^+/NADH ratio, sirtuin I, diet quality

Učinki časovno omejenega prehranjevanja z energijsko restrikcijo na antropometrične parametre ter kakovost spanja in življenja odraslih oseb s prekomerno telesno maso in debelostjo

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Uvod: Prekomerna telesna masa in debelost sta po vsem svetu velik javnozdravstveni problem. Debelost je povezana s pojavnostjo kronično nenalezljivih bolezni, nižjo kakovostjo življenja in slabšo kakovostjo spanja. Standardna prehranska strategija za zniževanje telesne mase je energijska restrikcija (CR). Ker živimo v sodobnem, hitrem življenjskem slogu, pa je v zadnjih letih vse bolj priljubljeno časovno omejeno prehranjevanje (TRE) in zaradi krajšega časa prehranjevanja in s tem lažjega vsakodnevnega upoštevanja prehranskega vzorca izvedljiva nova krono-prehranska strategija za zmanjšanje telesne mase in izboljšanje presnovnega zdravja. TRE je oblika prekinjivega posta, pri katerem je dnevno okno za prehranjevanje omejeno na določeno stalno časovno obdobje, običajno med 4 in 12 urami, preostale ure pa poteka postenje. TRE razdelimo na jutranje časovno omejeno prehranjevanje (eTRE) in popoldansko časovno omejeno prehranjevanje (ITRE). Neposredna primerjava eTRE+CR in ITRE+CR o učinkih na kazalnike zdravja je nova raziskovalna tema, zato je bil namen raziskave preučiti učinke eTRE+CR ter ITRE+CR v primerjavi s CR na antropometrične parametre, kakovost spanja in kakovost življenja pri asimptomatskih odraslih s prekomerno telesno maso in debelostjo.

Metode: V trimesečni intervencijski študiji je bilo 93 udeležencev razvrščenih v tri skupine glede na njihov individualni kronotip: eTRE+CR (okno prehranjevanja med 8.00 in 16.00), ITRE+CR (12.00 in 20.00) in CR (8.00 in 20.00). V vseh treh skupinah je bila predpisana enaka CR, struktura in število obrokov. Dnevne potrebe po energiji so bile izračunane na podlagi hitrosti presnove v mirovanju vsakega posameznika, pomnožene s stopnjo telesne dejavnosti in zmanjšane za -2093 kJ/-500 kcal. Na začetku in po treh mesecih intervencije so bile izvedene meritve telesne mase, obsega pasu (WC), analiza telesne sestave in meritve krvnega tlaka ter ocena kakovosti spanja in življenja.

Rezultati: Vse tri skupine, eTRE+CR, ITRE+CR in CR, so pokazale statistično pomembne učinke na zmanjšanje telesne mase, odstotka telesne maščobe (FM), visceralno maščobo, WC, pustno telesno maso in mišično maso, presnovno starost (MA), sistolični krvni tlak, diastolični krvni tlak (DBP) in povečanje odstotka skupne telesne vode (TBW) ter kakovosti življenja po koncu intervencije, vendar je eTRE+CR prinesel dodatni učinek pri FM (%), TBW (%), MA in DBP ($p < 0.05$) v primerjavi z ITRE+CR in CR ter večjo učinkovitost spanca v primerjavi s CR.

Razprava in zaključki: V študiji smo ugotovili, da je bil eTRE+CR učinkovitejši pri zmanjšanju FM (%), DBP, MA in povečanju TBW (%) ter učinkovitosti spanca v primerjavi s samim ITRE+CR in/ali CR. Vsi drugi parametri se med skupinami niso razlikovali.

Ključne besede: zgodnje in pozno časovno omejeno prehranjevanje, energijska restrikcija, antropometrični parametri, kakovost spanja, kakovost življenja

Effects of time restricted eating with energy restriction on anthropometric parameters, sleep quality and quality of life in overweight and obese adults

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Introduction: Worldwide, overweight and obesity are a major public health problem. Obesity is correlated with the incidence of chronic non-communicable diseases, lower quality of life and poorer quality of sleep. The standard dietary strategy for weight loss is caloric restriction (CR). As we live in a modern, fast-paced lifestyle, 'time-restricted eating' (TRE) has become increasingly popular in recent years and is a feasible new chrono-nutritional strategy for weight loss and metabolic health improvements due to the shorter eating time and thus easier daily adherence to dietary pattern. TRE is a form of intermittent fasting in which the daily eating window is limited to a specific consistent period of time, usually between 4 and 12 hours, with fasting duration the remaining hours. TRE can be divided into early time-restricted eating (eTRE) and late TRE (ITRE). A direct comparison of the effects of eTRE+CR and ITRE+CR on health indicators is a new research topic, so the aim of this study was to investigate the effects of eTRE+CR and ITRE+CR vs. CR on anthropometric parameters, sleep quality and quality of life in asymptomatic adults with overweight and obesity.

Methods: In the 3-month intervention study, 93 participants were assigned into three groups according to their individual chronotype: eTRE+CR (eating window between 8:00-16:00), ITRE+CR (eating window between 12:00-20:00) and CR (eating window between 8:00-20:00). In all three groups a similar energy deficit was prescribed and were identical in terms of structure and number of meals. Daily energy requirements were calculated based on the resting metabolic rate of each individual multiplied by the physical activity level and reduced by -2093 kJ/-500 kcal. Measurements of body weight (BW), waist circumference (WC), body composition analysis and blood pressure measurements were taken and sleep quality and quality of life was assessed at the baseline and after three months of the intervention, after at least 12 h of fasting.

Results: All three groups, eTRE+CR, ITRE+CR and CR showed statistically significant effects on the reduction of BW, body fat percentage (FM), visceral fat rating, WC, fat free mass, muscle mass, metabolic age (MA), systolic blood pressure, diastolic blood pressure (DBP) and increase in percentage total body water (TBW) and quality of life after the end of intervention, although eTRE+CR yielded more benefits on FM (%), TBW (%), MA and DBP ($p < 0.05$) compared to ITRE+CR and CR and greater sleep efficiency compared with CR.

Discussion and conclusions: In this study, we found that eTRE+CR was more effective in reducing FM (%), DBP, MA and increasing TBW (%) and sleep efficiency compared to ITRE+CR and/or CR alone. All other parameters did not differ between groups.

Keywords: early and late time restricted eating, caloric restriction, anthropometric parameters, sleep quality, quality of life

Ultrasonografske meritve skupnih karotidnih arterij pri časovno omejenem prehranjevanju

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Uvod: Porušeno metabolno zdravje je v razvitem svetu najpogostejša kronična presnovna bolezen. Predstavlja (za kajenjem) drugi najpomembnejši preprečljivi vzrok povečane obolevnosti in umrljivosti. Številne raziskave so dokazale vpliv motenj v metabolnem zdravju na pospešen nastanek ateroskleroze. Špansko združenje za nevrosonografijo je pred leti objavilo podatek, da ima 28% oseb, ki so doživeli možgansko kap, vidne ultrasonografske spremembe v karotidnih arterijah. Skupne karotidne arterije so najlažje dostopne arterije za ultrasonografski pregled in opravljanje določenih meritev, ki so zgodnji pokazatelji razvoja ateroskleroze. V 3-mesečni raziskavi, ki je potekala na UP Fakulteti za vede o zdravju, smo preverjali vpliv časovno omejenega prehranjevanja na parametre metabolnega zdravja pri prekomerno prehranjenih oseb, vključno z ultrasonografskimi parametri skupnih karotidnih arterij.

Metode: V raziskavo smo povabili 108 prekomerno prehranjenih oseb, starosti med 18 in 60 let, z indeksom telesne mase med 25 in 35 kg/m². Vsi so imeli predpisano energijsko restrikcijo in so bili razdeljeni v 3 skupine: 1. skupina se je lahko prehranjevala časovno neomejeno (od 8. do 20. ure), 2. skupina v jutranjem časovnem oknu (med 8. in 16. uro), 3. skupina pa v večernem časovnem oknu (od 12. do 20. ure). Poleg biokemijskih in antropometrijskih meritev smo opravili še ultrasonografske meritve skupnih karotidnih arterij: debelino intime-medie (IMT), najvišjo sistolično hitrost (PSV) ter končno diastolično hitrost (EDV). Vse meritve smo opravili na začetku raziskave ter po treh mesecih.

Rezultati: Preverjali smo, ali obstajajo razlike med skupinami ob začetku in koncu intervencije s testom ANOVA in sicer za naslednje parametre: PSV levo ($p=0,687$), PSV desno ($p=0,891$) in IMT levo ($p=0,484$) za prvo meritev, ter IMT levo ($p=0,658$), IMT desno ($p=0,713$) in PSV desno ($p=0,547$) za drugo meritev. Ugotovili smo, da ni statistično značilne razlike med skupinami za nobeno meritev. Učinek intervencije je bil statistično značilen pri meritvah hitrosti ($p<0,05$).

Razprava in zaključki: Zaključimo lahko, da trimesečna intervencija z energijsko restrikcijo že kaže prve ugodne učinke tudi na stanju skupnih karotidnih arterij, omejeno okno prehranjevanja pa ne daje dodatne prednosti. V nadaljevanju bo potrebno ugotoviti, kateri biokemijski parametri se ob izgubi telesne mase izboljšajo in so lahko razlog za izboljšave stanja žilja.

Ključne besede: metabolno zdravje, ateroskleroza, karotidne arterije, ultrazvok

Ultrasonographic measurements of the common carotid arteries in time-restricted eating

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Introduction: Impaired metabolic health is the most common chronic metabolic disease in the developed world. It is the second most important preventable cause of increased morbidity and mortality (after smoking). Numerous studies have demonstrated the impact of metabolic health disorders on the accelerated development of atherosclerosis. A few years ago, the Spanish Society of Neurosonography published that 28% of stroke survivors had visible ultrasonographic changes in the carotid arteries. The common carotid arteries are the most easily accessible arteries for ultrasonographic examination and for performing certain measurements that are early indicators of the development of atherosclerosis. In a 3-month study conducted at the UP Faculty of Health Sciences, we examined the impact of time-restricted eating on metabolic health parameters in overweight subjects, including ultrasonographic parameters of the common carotid arteries.

Methods: We recruited 108 overweight (obese) person, between 18 and 60 years of age with a body mass index between 25 and 35 kg/m². All subjects were on a prescribed energy restriction and were divided into 3 groups: group 1 was allowed to eat for an unlimited period of time (8 am to 8 pm), group 2 was allowed to eat during the morning time window (8 am to 4 pm), and group 3 - during the evening time window (12 pm to 8 pm). In addition to biochemical and anthropometric measurements, ultrasonographic measurements of the common carotid arteries were performed: intima-media thickness (IMT), peak systolic velocity (PSV) and end-diastolic velocity (EDV). All measurements were performed at baseline and then after 3 months.

Results: We tested whether there were differences between groups at baseline and at the end of the intervention using ANOVA for the following parameters: left PSV ($p=0.687$), right PSV ($p=0.891$) and left IMT ($p=0.484$) for the first measurement, and left IMT ($p=0.658$), right IMT ($p=0.713$) and right PSV ($p=0.547$) for the second measurement. We found no statistically significant difference between the groups for any of the measurements. The effect of the intervention was statistically significant for the blood velocity measurements ($p<0.05$).

Discussion and conclusions: We can conclude that the three-month intervention with energy restriction already shows the beneficial effects on the condition of the common carotid arteries, but the limited eating window does not give any additional advantage. In the follow-up, it would be necessary to determine which biochemical parameters improve upon weight loss, and whether they are the reason of improvement of the condition of the blood vessels.

Keywords: metabolic health, atherosclerosis, carotid arteries, ultrasound

Kratkoročni učinki časovno omejenega prehranjevanja z energijsko restrikcijo na metabolno zdravje odraslih s prekomerno telesno maso in debelostjo

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Uvod: Časovno omejeno prehranjevanje izboljšuje metabolno zdravje. Kljub temu ostaja nejasno, ali so izboljšanja biokemičnih parametrov in metabolnih indeksov posledica zgolj energijske restrikcije (CR) ali dodatne časovne omejitve prehranjevanja. Naš cilj je natančneje raziskati in primerjati učinkovitost dveh različnih pristopov časovno omejenega prehranjevanja z energijsko restrikcijo; zgodnje časovno omejeno prehranjevanje (eTRE+CR) in pozno časovno omejeno prehranjevanje (ITRE+CR), ter ju primerjati z izključno energijsko restrikcijo (CR), da bi ugotovili njihov vpliv na metabolno zdravje.

Metode: V trimesečni intervenciji je bilo 90 udeležencev razdeljenih v tri skupine glede na njihov kronotip: eTRE+CR (čas prehranjevanja med 8:00 in 16:00), ITRE+CR (čas prehranjevanja med 12:00 in 20:00) in CR (čas prehranjevanja med 8:00 in 20:00). Na začetku, po prvem in tretjem mesecu intervencije so bili na tešče izmerjeni sledeči biokemični parametri: glukoza, celokupni holesterol (CHOL), LDL-holesterol, HDL-holesterol, trigliceridi (TG), C-reaktivni protein (CRP), aspartat aminotransferaza (AST), alanin aminotransferaza (ALT) in inzulin. Poleg tega so bili izračunani metabolni indeksi, in sicer HOMA-IR, HOMA- β , TyG, TyG-BMI, METS-IR, QUICK-INDEX, VAI in LAP. Statistične analize so bile izvedene v statističnem programu SPSS.

Rezultati: V vseh treh skupinah je bilo statistično pomembno znižanje koncentracije glukoze, inzulina in metabolnih indeksov (HOMA-IR, TyG, TyG-BMI, METS-IR in QUICK-INDEX) po treh mesecih ($p < 0,05$). Nasprotno se je indeks inzulinske občutljivosti HOMA- β značilno zvišal v vseh treh skupinah. Pri znižanju glukoze so bile statistično pomembne razlike med skupinami ($p = 0,025$), pri čemer je bilo največje znižanje glukoze v skupini eTRE+CR. Nasprotno pa se spremembe ravni inzulina in metabolnih indeksov (HOMA-IR, HOMA- β , TyG, TyG-BMI, METS-IR in QUICK-INDEX) niso značilno razlikovale med skupinami. Serumske ravni triacilgliceridov, AST in ALT ter indeksa VAI in LAP so se značilno znižali le v skupinah ITRE+CR in CR ($p < 0,05$), a kljub temu ni bilo zaznanih značilnih razlik med skupinami.

Diskusija in zaključki: V študiji smo ugotovili, da je izboljšanje biokemičnih parametrov in metabolnih indeksov bilo večinoma (z izjemo glukoze na tešče) posledica CR in ne TRE. Kljub temu se zdi, da je eTRE+CR bolj učinkovit pri uravnavanju glukozne homeostaze kot ITRE+CR ali CR.

Ključne besede: zgodnje in pozno časovno omejeno prehranjevanje, energijska restrikcija, biokemični parametri, inzulin, metabolni indeksi

Short-term effects of time restricted eating with energy restriction, on the metabolic health of overweight and obese adults

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Introduction: Time-restricted eating (TRE) improves metabolic health. However, it is not yet clear whether the effects on biochemical parameters and metabolic indexes are due to caloric restriction (CR) alone or in combination with TRE. The aim of the study was therefore to compare the effectiveness of the dietary strategy TRE+CR at two different times of day: early time-restricted eating combined with caloric restriction (eTRE+CR) and late time-restricted eating combined with caloric restriction (ITRE+CR) compared to CR alone on metabolic health.

Methods: In a 3-month intervention, 90 participants were assigned into three groups according to their chronotype: eTRE+CR (eating window between 8:00 and 16:00), ITRE+CR (eating window between 12:00 and 20:00), and CR (eating window between 8:00 and 20:00). Fasting glucose (FG), total cholesterol (CHOL), LDL-cholesterol, HDL-cholesterol, triacylglycerols (TG), C-reactive protein (CRP), aspartate aminotransferase (AST), alanine aminotransferase (ALT) and the analysis of insulin were measured at baseline, after the first and third month of the intervention, after a fasting period of at least 12 h. Moreover, metabolic indexes (HOMA-IR, HOMA- β , TyG, TyG-BMI, METS-IR, QUICK-INDEX, VAI in LAP) were calculated according to published equations. The statistical analyses were performed in SPSS.

Results: In all three groups, there was a statistically significant reduction in fasting glucose, insulin and metabolic indices (HOMA-IR, TyG, TyG-BMI, METS-IR and QUICK-INDEX) over three months ($p < 0.05$). In contrast, the insulin sensitivity index HOMA- β increased significantly in all three groups. There were statistically significant differences in blood glucose reduction between the groups ($p = 0.025$), with the greatest glucose reduction in the eTRE+CR group. The changes in insulin levels and metabolic indices (HOMA-IR, HOMA- β , TyG, TyG-BMI, METS-IR and QUICK-INDEX) were not significantly different between the groups. Additionally, serum levels of TG, AST, ALT and VAI and LAP indexes were significantly decreased only in the ITRE+CR and CR groups ($p < 0.05$), but no significant differences were found between groups.

Discussion and conclusions: In this study, we found that the improvement in biochemical parameters and metabolic indexes was largely (with the exception of fasting glucose levels) due to CR rather than TRE. However, it seems that eTRE+CR is more efficient in regulation of glucose homeostasis than ITRE+CR or CR.

Keywords: early and late time restricted eating, caloric restriction, biochemical parameters, insulin, metabolic indexes

Je znanje o varnosti živil med starejšimi odraslimi ustrezno?

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Uvod: Pomemben javnozdravstveni problem so bolezni, povzročene z živili, ki jih povzročajo patogeni mikroorganizmi. Zaradi neustreznega ravnanja z živili smo jim izpostavljeni vsi, še posebej pa otroci, starostniki, nosečnice ter ljudje z oslabiljenim imunskim sistemom in revni. Starostniki spadajo v ranljivejšo skupino, saj se organi in telesni sistemi s staranjem spreminjajo, njihova prebavila zadržujejo hrano dlje časa, želodčna kislina pa s starostjo upada. S pomočjo anketnih vprašalnikov in polstrukturiranih intervjujev smo želeli oceniti odnos do zagotavljanja varnosti živil ter ugotoviti ali je znanje o varnosti živil od nakupa do priprave živil doma, med starejšimi odraslimi boljše kot v preteklih slovenskih in tujih študijah.

Metode: Uporabljene so bile sledeče metode dela: pregled literature, namenski anketni vprašalnik in delno strukturirani intervju. Znanstvene članke smo iskali v bibliografskih bazah Scopus, Web of Science, Pubmed in Digitalne knjižnice Univerze v Ljubljani (DiKUL). V pregled smo vključili vse znanstvene članke, ki obravnavajo znanje, ravnanje in odnos starostnikov do zagotavljanja varnosti živil. Udeležence za anketiranje in intervjuje smo izbrali po metodi snežne kepe. Anketni vprašalnik je v celoti izpolnilo 125 starostnikov, starejših od 65 let. Polstrukturirani intervjuji so bili opravljeni z 10 udeleženci, starejšimi od 65 let.

Rezultati: Rezultati so pokazali, da so starejši odrasli sicer osveščeni na področju varnosti živil, vendar znanja ne znajo v celoti prenesti v prakso. Ugotovili smo, da se večkrat poslužijo nevarnih praks priprave in uživanja hrane (nezadostna toplotna obdelava živil, neuporaba vbodnega termometra, itd.), zaradi česar so pogosto izpostavljeni tveganjem, za bolezni, povzročene z živili. Kljub temu, da se starejši odrasli zavedajo tveganj, ki jih lahko povzroči nepoznavanje ali nezadostno izvajanje načel varnosti živil, pa se večkrat ne prepoznajo kot osebno dovzetne. Premalo se zavedajo lastne vloge pri zagotavljanju varnosti živil, saj sami sebe tretirajo kot manj odgovorne v primerjavi z drugimi členi agro-živilske verige.

Razprava in zaključki: Rezultati raziskave so primerljivi s preteklimi slovenskimi in tujimi študijami. Med starejšimi odraslimi je informiranost o varnosti živil še vedno na isti ravni kot v preteklih študijah, zato bi bilo potrebno dvigniti nivo znanja in razumevanja načel varnosti živil ter proučiti ustrezne kanale obveščanja starejše populacije.

Ključne besede: varnost živil, okužbe z živili, starejši odrasli, anketni vprašalnik, delno strukturirani intervju

Is the knowledge about food safety among the older adults adequate?

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Introduction: A significant public health problem is foodborne illnesses caused by pathogenic microorganisms. Due to improper handling of food, we are all at risk, especially children, the elderly, pregnant women, individuals with weakened immune systems, and the poor. With the help of questionnaires and semi-structured interviews, aimed to assess the attitude towards ensuring food safety and determine whether the knowledge of food safety from purchasing to preparing food at home, among the elderly is better than in previous Slovenian and foreign studies.

Methods: The methods of a literature review, a method of a survey questionnaire and the method of a semi-structured interview were used. We searched for scientific articles using the bibliographic databases Scopus, Web of Science, Pubmed, and the Digital Library of the University of Ljubljana (DiKUL). We reviewed all scientific articles on the knowledge, behaviour, and attitude of the elderly towards ensuring food safety. The participants for the survey and interview were selected with snowball sampling. The questionnaire was completely filled out by 125 elderly people over the age of 65. Semi-structured interviews were conducted with 10 participants over the age of 65.

Results: The results showed that although the elderly are aware of food safety, they are unable to fully apply this knowledge in practice. We found that they often engage in hazardous food preparation and consumption practices (insufficient cooking of food, not using a probe thermometer, etc.), which frequently exposes them to the risks of foodborne illnesses. Despite being aware of the risks that can arise from not knowing or inadequately implementing the principles of safe food, the elderly often do not recognize themselves as personally susceptible. They are insufficiently aware of their own role in ensuring food safety, as they perceive themselves as less responsible.

Discussion and conclusion: The research results are comparable to previous Slovenian and international studies. Among the elderly, awareness of food safety remains at the same level as in past studies. Therefore, it is necessary to raise the level of knowledge and understanding of food safety principles and to explore appropriate channels for informing the older population.

Keywords: food safety, foodborne infections, elderly, survey questionnaire, semi-structured interview

Vpliv čaja iz laškega smilja na prepustnost črevesne pregrade ter translokacijo bakterij *Salmonella* Infantis

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Uvod: Kronično sistemsko vnetje in disbioza črevesja, opaženi stanji pri debelosti in drugih kroničnih boleznih, vplivata na funkcijo črevesne pregrade (ČP). Za obe stanji je značilna povečana prepustnost ČP in s tem povezana translokacija bakterij. Bakterijska translokacija, ki pomeni prehod viabilnih bakterij iz črevesja v zunajčrevesne prostore, lahko vodi v razvoj sistemskih vnetnih stanj in s tem še dodatno spodbuja kronično vnetje. Sestavine prehrane, kot so probiotiki, polifenoli, lipidi in beljakovine, lahko izboljšajo funkcijo ČP bodisi z zaviranjem vnetja ali z neposrednim delovanjem na ČP. Aromatična sredozemska rastlina laški smilj (*Helichrysum italicum*) predstavlja bogat vir polifenolnih spojin. V naših predhodnih raziskavah smo že pokazali protivnetne učinke čaja iz laškega smilja (ČLS), analiza transkriptoma črevesnih celic pa je pokazala potencialne učinke tudi na samo integriteto ČP. V dotični raziskavi smo želeli potrditi vpliv ČLS na ČP preko spremenjenega izražanja genov za proteine tesnih stikov. Prav tako smo spremljali vpliv ČLS na transepitelno električno upornost (TEER) in sposobnost adhezije, invazije in translokacije bakterij *Salmonella* Infantis.

Metode dela: Za model prepustnosti ČP smo uporabili epitelne črevesne celice Caco-2, gojene na porozni membrani insertov Transwell. Z merjenjem TEER pred in po tretiranju celic smo preverjali celovitost celičnega monosloja. Celicam z ali brez tretiranja s ČLS smo inducirali vnetje s toplotno ubitimi (TUB) ali z živimi bakterijami *S. Infantis*. Po tretiranju smo izolirano RNA s postopkom reverzne transkripcije prepisali v komplementarno DNA in preverili izražanje genov za izbrane proteine tesnih stikov z verižno reakcijo s polimerazo v realnem času (RT-PCR). Za določanje števila translociranih bakterij *S. Infantis* smo po končani inkubaciji vzorčili gojišče v bazolateralnem delu in nanесли serijske redčitve na Triptični soja-agar.

Rezultati: 24-urni tretma s TUB je znižal TEER celic Caco-2 za 60,0 %, medtem ko je sočasen tretma s ČLS (0,2 v/v%) povzročil 51,3 % znižanje ($p=0,0284$). Pred-tretiranje s ČLS za 24 ur samo po sebi ni imelo učinka na TEER, medtem ko so po 24-urni izpostavitvi TUB celice pred-tretirane s ČLS imele skoraj 10 % manjše znižanje TEER v primerjavi s celicami, ki niso bile pred-tretirane ($p=0.0034$). Nadalje je 24-urno pred-tretiranje celic s ČLS v koncentraciji 0,2 v/v% preprečilo translokacijo bakterij *S. Infantis* preko celičnega monosloja za 95 %. Kljub temu po 2-urni infekciji z bakterijami med poskusi ni bilo značilne razlike v TEER.

Razprava in zaključki: Meritve celovitosti epitelija Caco-2 celic so pokazale, da ČLS lahko izboljša integriteto ČP, porušeno s TUB. Slednje smo potrdili tudi s spremembo izražanja genov tesnih stikov. Pred-tretiranje s ČLS pa je prav tako preprečilo translokacijo bakterij *S. Infantis*. Na osnovi rezultatov naše študije lahko sklepamo na pomembno vlogo ČLS pri ohranjanju integritete ČP, zlasti pri vnetnih stanjih.

Ključne besede: laški smilj, integriteta črevesne stene, tesni stiki, vnetje, translokacija, *Salmonella* Infantis

Effect of *Helichrysum italicum* infusion on intestinal barrier permeability and translocation of *Salmonella* Infantis

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Introduction: Chronic systemic inflammation and gut dysbiosis, conditions observed in obesity and other chronic diseases, affect the function of the intestinal barrier (IB). Both conditions are characterized by increased IB permeability, which is associated with the translocation of bacteria. Bacterial translocation, which denotes the passage of viable bacteria from the gut to extraintestinal sites, can lead to the development of systemic inflammatory conditions and thus further promotes chronic inflammation. Dietary components, including probiotics, polyphenols, lipids, and proteins can improve IB function by either suppressing inflammation or by acting directly on IB. *Helichrysum italicum* is an aromatic Mediterranean herb rich in polyphenolic compounds. In our previous studies, we have already demonstrated anti-inflammatory effects of *H. italicum* infusion (HII), whereas the results from a transcriptome analysis of intestinal cells have shown potential effects on the integrity of the IB. In the present study, we aimed to confirm the effect of HII on the IB via altering the expression of tight junction proteins. Additionally, we evaluated its effects on transepithelial electrical resistance (TEER) and the adhesion, invasion and translocation capacity of *Salmonella* Infantis. **Methods:** Caco-2 intestinal epithelial cells cultured on the porous membrane of Transwell inserts were used as a model for the permeability of the IB. The integrity of the cell monolayer was verified by TEER measurements before and after all treatments. Inflammation in cells incubated with or without HII was induced by heat-killed (HKB) or live *S. Infantis* bacteria. Following treatment, isolated RNA was reverse transcribed into complementary DNA, and gene expression of selected tight junction proteins was analysed by real-time polymerase chain reaction (RT-PCR). To determine the number of translocated *S. Infantis* bacteria, the media from basolateral compartment was sampled after incubation and serial dilutions were plated on tryptic soy agar.

Results: 24-hour treatment with HKB reduced TEER of Caco-2 cells by 60.0%, while co-treatment together with HII (0.2 v/v%) resulted in a 51.3% reduction ($p=0.0284$). Pre-treatment with HII for 24 h had no effect on TEER per se, but when followed by 24-hour HKB treatment, cells pre-treated with HII had almost 10% lower decrease in TEER compared to non-pre-treated cells ($p=0.0034$). Additionally, 24-hour pre-treatment with HII (0.2 v/v%) prevented the translocation of *S. Infantis* bacteria across the cell monolayer by 95%. However, after a 2-hour bacterial infection no significant differences in TEER were observed between experiments.

Discussion and conclusions: Measurements of the epithelial integrity of Caco-2 cell showed that the HII can improve the HKB-disrupted IB integrity. The latter was confirmed by altering the expression of tight junction genes. Pre-treatment with HII also prevented translocation of *S. Infantis*. The results of our study suggest an important role of HII in maintaining the integrity of the IB, especially in inflammatory conditions.

Keywords: *Helichrysum italicum*, intestinal barrier integrity, tight junctions, inflammation, translocation, *Salmonella* Infantis

Protimikrobni potencial kostanjevega medu

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Uvod: Zaradi naraščajoče odpornosti na protimikrobna sredstva, se vedno več pozornosti usmerja k uporabi snovi naravnega izvora. Med je sladka in viskozna snov iz ogljikovih hidratov, vode in več kot 200-ih bioaktivnih snovi. Na samo sestavo medu vpliva lahko več dejavnikov, kot so: rastlinski vir, vrsta čebele, sezonski in okoljski dejavniki, pogoji predelave in skladiščenja. Zaradi kombinacije bioaktivnih snovi, je med poznan po antioksidativnem, imunomodulatornem, protivnetnem, antikancerogenem in protimikrobnem delovanju. Poglavitni protimikrobni dejavniki so visoka osmolarnost, prisotnost vodikovega peroksida, nizka vrednost pH, vsebnost organskih kislin in flavonoidov. Namen naše študije je bil določiti protimikrobno aktivnost različnih vzorcev kostanjevega medu in preveriti korelacijo protimikrobne aktivnosti z drugimi karakteristikami medu, kot so koncentracija vodikovega peroksida in bioflavonoidov.

Metode: Analizirali smo 30 vzorcev kostanjevega medu, slovenskega, italijanskega in bosanskega porekla. Protimikrobno aktivnost smo določali z mikrodilucijsko metodo in barvilom p-iodo–nitro–tetrazolijev klorid (INT) proti bakteriji *Escherichia coli* ATCC 8739. Minimalna inhibitorna koncentracija (MIK) je bila določena vizualno, pri prvi koncentraciji medu, kjer še ni bila zaznana obarvanost medija kot posledica bakterijske rasti. Vsem vzorcem smo določili tudi vsebnost skupnih bioflavonoidov po metodi Folin-Ciocalteu. Koncentracijo vodikovega peroksida smo izmerili z reakcijo med H₂O₂ in o-dianizidinom. Oksidacijski produkt se določi spektrofotometrično pri valovni dolžini 450 nm. .

Rezultati: Vsi vzorci kostanjevega medu so na bakterijo *E. coli* ATCC 8739 delovali protimikrobno, z razponom vrednosti MIK od 37,5 mg/mL do 150 mg/mL medu. Najnižja izmerjena koncentracija vodikovega peroksida je bila 27,5 µg/g, najvišje pa 146,5 µg/g medu. Koncentracija skupnih flavonoidov je bila med 58,6 mg/100 g in 208,5 mg/100 g medu. Korelacije med koncentracijo vodikovega peroksida ali skupnim številom flavonoidov in protimikrobnim delovanjem medu nismo dokazali.

Razprava in zaključki: Kljub dokazani protimikrobni aktivnosti vseh vzorcev medu, slednjega nismo mogli pripisati različnim koncentracijam vodikovega peroksida ali razlikam v skupni količini flavonoidov. Glavna ugotovitev raziskave je, da je protimikrobno delovanje medu verjetno rezultat medsebojnega delovanja različnih parametrov.

Ključne besede: bakterijska rezistenca, protimikrobno, kostanjev med

Antimicrobial potential in chestnut honey

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Introduction: Due to the increasing resistance to antimicrobial agents, more and more attention is directed to the use of substances of natural origin. Honey is a sweet and viscous substance made of carbohydrates, water and more than 200 bioactive substances. The composition of honey can be influenced by several factors, such as: plant source, type of bee, seasonal and environmental factors, processing and storage conditions. Due to the combination of bioactive substances, honey is known for its antioxidant, immunomodulatory, anti-inflammatory, anticancer and antimicrobial effects. The main antimicrobial factors are high osmolarity, the presence of hydrogen peroxide, low pH, the content of organic acids and flavonoids. The purpose of our study was to determine the antimicrobial activity of different samples of chestnut honey and to verify the correlation of antimicrobial activity with other characteristics of honey, such as the concentration of hydrogen peroxide and bioflavonoids.

Methods: We analyzed 30 samples of chestnut honey of Slovenian, Italian and Bosnian origin. Antimicrobial activity was determined using the microdilution method and the dye p-iodo-nitro-tetrazolium chloride (INT) against the bacterium *Escherichia coli* ATCC 8739. The minimum inhibitory concentration (MIC) was determined visually, at the first concentration of honey, where no discoloration of the medium was detected as a result of bacterial growth. The content of total bioflavonoids was also determined for all samples according to the Folin-Ciocalteu method. The concentration of hydrogen peroxide was measured by the reaction between H₂O₂ and o-dianisidine. The oxidation product is determined spectrophotometrically at a wavelength of 450 nm.

Results: All chestnut honey samples were working antimicrobially against *E. coli* ATCC 8739, with MIC values ranging from 37.5 mg/mL to 150 mg/mL of honey. The lowest measured concentration of hydrogen peroxide was 27.5 µg/g, and the highest was 146.5 µg/g of honey. The concentration of total flavonoids was between 58.6 mg/100 g and 208.5 mg/100 g of honey. We did not prove a correlation between the concentration of hydrogen peroxide or the total number of flavonoids and the antimicrobial activity of honey.

Discussion and conclusions: Despite the proven antimicrobial activity of all honey samples, we could not attribute the latter to different concentrations of hydrogen peroxide or differences in the total amount of flavonoids. The main conclusion of the research is that the antimicrobial activity of honey is probably the result of the interaction of various parameters.

Keywords: bacterial resistance, antimicrobial, chestnut honey

Izzivi doseganja prehranske preskrbljenosti prebivalcev domov za starejše občane

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Uvod: S podaljševanjem življenjske dobe, v populaciji vse bolj narašča število starejših odraslih. Zlasti tisti, ki živijo v ustanovah, kot so domovi za starejše občane (DSO), veljajo za prehransko bolj ogroženo populacijsko skupino. Ustrezna preskrbljenost s hranili in mikrohranili je ključna za ohranjanje zdravja in preprečevanje zdravstvenih komplikacij. Namen raziskave je bil ugotoviti, 1) kakšna je preskrbljenost prebivalcev slovenskih DSO s hranili in mikrohranili, 2) kakšno je tveganje za podhranjenost, in dodatno, 3) kakšna je prevalenca sarkopenije.

Metode: V okviru projekta Nutricare je bila izvedena nacionalno reprezentativna presečna študija. Raziskavo smo izvedli v 20 DSO iz vseh 9 zdravstvenih regij Slovenije. Vključenih je bilo 387 prebivalcev DSO, v starost 65-101 let. Pridobljeni so bili podatki za običajne dnevne prehranske vnose makrohranil in mikrohranil (2x 24h priklic jedilnika prejšnjega dne, vprašalnik o pogostosti uživanja posameznih skupin živil), prehranski status (Mini prehranska ocena), meritve mišične moči (stisk roke z dinamometrom), meritve telesne sestave (bioimpedančna spektroskopija). Za 13 DSO smo pridobili tudi podatke o tedenskih jedilnikih.

Rezultati: Tveganje za podhranjenost smo zaznali pri cca. 30 % udeležencev, podhranjenost pri cca. 3%. 39 % moških in žensk je imelo indeks telesne mase > 30 kg/m². Ugotovljen je bil visok vnos maščob in živil živalskega izvora. Vnos ogljikovih hidratov in prehranskih vlaknin je bil pod priporočenimi, kar je posledica skromnega vnosa sadja, zelenjave in žit. Vnos beljakovin je bil nižji od 1 g/kg telesne mase pri 35 % žensk in 40 % moških. Vnosi hranil so se dobro ujemali s hranilno sestavo obrokov v DSO. 63 % prebivalcev DSO prehrani dodaja vsaj eno mikrohranilo, najpogosteje je to vitamin D, sledijo folat, vitamin B12, magnezij in železo. Prehranski vnosi so bili sub optimalni za večino izbranih mikrohranil, vključno z magnezijem, folatom, vitaminom B12, vitaminom D, vitaminom A, kalijem. Pomanjkanje vitamina D je bilo zaznano pri 30 %, vitamina B12 pri 22 %, folata pri 22 % udeležencev. Pri 44 % udeležencev smo ugotovili visoko verjetnost sarkopenije, pri 28 % pa prisotnost sarkopenije. 89 % udeležencev s sarkopenijo je imelo tudi visok delež maščobne telesne mase, kar kaže na prisotnost sarkopenične debelosti.

Razprava in zaključki: Prehranski vnosi prebivalcev DSO kažejo na potrebo po optimizaciji vnosa hranil in mikrohranil, skladno s priporočili. Nujno bi bilo redno spremljanje prehranskega statusa prebivalcev DSO s strani ustrezno usposobljenega osebja in izvedba primernih individualno prilagojenih intervencij, ki bi pomagale preprečiti ali omiliti izpostavljenost zdravstvena tveganja.

Ključne besede: starejši odrasli, dom za starejše občane, prehranski vnos, prehranski status, sarkopenija

Dietary challenges in the population of nursing home residents

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Introduction: As life expectancy increases, the number of older adults in the population is increasing. In particular, those living in institutions such as nursing homes are considered a nutritionally more vulnerable population group. An adequate supply of nutrients and micronutrients is key to maintaining health and preventing health complications. The aim of the research was to find out 1) usual intakes of nutrients and micronutrients of the Slovenian NH residents, 2) what is the prevalence of malnutrition, and additionally, 3) what is the prevalence of sarcopenia.

Methods: A nationally representative cross-sectional study was conducted as part of the Nutricare project. We conducted the research in 20 NH from all 9 health regions of Slovenia. 387 NH residents, aged 65-101, were included. Data were obtained for the usual daily dietary intake of macronutrients and micronutrients (2x 24h dietary recall, food frequency), nutritional status (Mini nutritional assessment), muscle strength measurements (hand grip with dynamometer), body composition measurements (bioimpedance spectroscopy). We also obtained data on weekly menus for 13 NH.

Results: The risk of malnutrition was detected in approx. 30% of participants, malnutrition in approx. 3%. 39% of males and females had body mass index > 30 kg/m². A high intake of fats and foods of animal origin was found. The intake of carbohydrates and dietary fiber was below the recommended levels, which is a consequence of the modest intake of fruits, vegetables and cereals. Protein intake was lower than 1 g/kg body weight in 35% of females and 40% of males. Nutrient intakes reflected the nutritional composition of meals in NH. 63% of NH residents are supplementing at least one micronutrient to their diet, the most common being vitamin D, followed by folate, vitamin B12, magnesium and iron. Dietary intakes were suboptimal for most of the selected micronutrients, including magnesium, folate, vitamin B12, vitamin D, vitamin A, potassium. Vitamin D deficiency was detected in 30%, vitamin B12 in 22%, folate in 22% of participants. We found a high probability of sarcopenia in 44% of the participants, and the presence of sarcopenia in 28%. 89% of participants with sarcopenia also had a high proportion of body fat, indicating the presence of sarcopenic obesity.

Discussion and conclusions: Dietary intakes of NH residents indicate the need to optimize the nutrient intake in accordance with recommendations. It would be necessary to regularly monitor the nutritional status of NH residents by qualified staff and implement suitable individually adapted interventions that would help prevent or mitigate the exposed health risks.

Keywords: older adults, nursing home, dietary intake, nutritional status, sarcopenia

Spletne kampanje o prehrani v okviru promocije zdravja na delovnem mestu

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Uvod: Delovno mesto, pomemben sestavni del vsakdanjega življenja delovnega prebivalstva, predstavlja pomembno področje za spodbujanje pozitivnih sprememb v običajnih vedenjskih vzorcih zaposlenih. Uporaba različnih intervencijskih strategij je dokazala učinkovitost pri obravnavi težav, povezanih s prekomerno telesno maso in debelostjo.

Metode: Ta presečna študija je bila sestavni del obsežnega programa promocije zdravja na delovnem mestu, izvedenega v malih in srednje velikih podjetjih v zahodni kohezijski regiji Slovenije. Program je vključeval spletno usmerjene izobraževalne kampanje, namenjene spodbujanju pozitivnih sprememb življenjskega sloga med zaposlenimi, in je trajal od leta 2020 do 2022. Pred začetkom izobraževalne kampanje so udeleženci prostovoljno izpolnili vprašalnik. Analiza je bila osredotočena na vedenjske vzorce 370 delavcev, upoštevajoč razvrstitev dela (prevladujoče sedeče, stoječe ali fizično delo), indeks telesne mase, spol, starost ter izbrane indikatorje prehranjevalnih navad. Od 88 podjetij, vključenih v študijo, jih je 26 aktivno sodelovalo v naših spletnih kampanjah o prehrani.

Rezultati: Med 370 udeleženci iz 26 podjetij vključenih v študijo je bilo 46,5% žensk in 53,5% moških. Prevladujoča starostna skupina med zaposlenimi je bila od 45 do 70 let, kar predstavlja večino. Približno 57% udeležencev je opravljalo sedeče delo. Delež ženskih zaposlenih z normalno telesno maso je znašal 38,4%, medtem ko je bil delež moških z normalno telesno maso 16,7%. Nezdruve prehranjevalne navade so bile najpogostejše pri uživanju rib in najmanj pogoste pri pitju sladkih napitkov. Na splošno je višji odstotek žensk (67,4%) poročal o prevladujoče dobrih prehranjevalnih navadah, definiranih kot pet ali več pozitivnih prehranskih praks, v primerjavi z moškimi (50%). Empirična analiza je pokazala, da so zaposleni v prevladujoče sedečih delovnih mestih povprečno dosegli najvišjo frekvenco sodelovanja - merjeno kot delež prebranih izobraževalnih osebnih e-poštnih sporočil. Poleg tega so posamezniki z boljšimi prehranjevalnimi navadami in bolj ugodnim indeksom telesne mase izkazali najvišjo frekvenco spremljanja spletnih kampanj.

Diskusija in Zaključki: Kljub splošno nizki frekvenci sodelovanja udeležencev je naša študija pokazala višjo frekvenco udeleževanja v spletnih izobraževalnih kampanjah pri zaposlenih na sedečih delovnih mestih in zdravimi prehranjevalnimi navadami. Ta vpogled zagotavlja dragocene informacije glede potencialne učinkovitosti prilagojenih kampanj za promocijo zdravja na delovnem mestu, kar prispeva k širšemu področju javnega zdravja.

Ključne besede: prehrana; promocija zdravja; delovno mesto; debelost; kampanja o prehrani

Web-Based Nutrition Campaigns within a Workplace Health Promotion Program

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Introduction: The workplace, a significant component of daily life for the working population, represents a pivotal arena for instigating positive changes in employees' habitual behaviours. The implementation of diverse intervention strategies has consistently demonstrated efficacy in addressing issues related to overweight and obesity.

Methods: This cross-sectional study was an integral part of an extensive Workplace Health Promotion Program (WHPP) executed within the small and medium-sized enterprises (SMEs) of Western Slovenia. The program featured web-based educational campaigns designed to foster constructive lifestyle changes among employees and spanned the period from 2020 to 2022. Prior to the commencement of the educational initiative, participants willingly completed a screening questionnaire. The analysis focused on the behavioural patterns of 370 workers, considering job classification (predominantly sedentary, predominantly standing, or predominantly physical), body mass index (BMI), gender, age, and selected dietary indicators. Out of the 88 companies involved in the WHPP, 26 actively participated in our web-based campaigns on nutrition.

Results: Out of the 370 participants from 26 companies', 46.5% were women, and 53.5% were men. The predominant age group among employees was 45-70, constituting the majority. Approximately 57% of participants held sedentary positions. The distribution of normal-weight female employees stood at 38.4%, while normal-weight male employees accounted for 16.7%. Notably, unhealthy dietary habits were most prevalent in fish consumption and least prevalent in the intake of sugary beverages. On the whole, a higher percentage of women (67.4%) reported predominantly good dietary habits, defined as having five or more positive dietary practices, compared to their male counterparts (50%). Employing empirical analysis our findings indicated that, on average, employees engaged in predominantly sedentary work exhibited the highest frequency of engagement—measured as the proportion of educational personal emails read. Furthermore, individuals with commendable dietary habits and favourable BMI emerged as the most enthusiastic consumers of the web-based campaigns.

Discussion and Conclusions: Despite an overall modest participant engagement frequency, our study highlights the distinct appeal of web-based educational campaigns to workers with sedentary jobs and healthy dietary habits. This insight provides valuable information regarding the potential effectiveness of tailored workplace health promotion campaigns, contributing to the broader field of public health practice.

Keywords: nutrition; health promotion; workplace; obesity; nutrition campaign

Sestava črevesne mikrobiote kot kazalnik dolgoročnih načinov prehranjevanja

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Uvod: Razumevanje zapletenega odnosa med prehrano in sestavo črevesne mikrobiote ostaja pomembno področje raziskovanja. Kljub znanim učinkom prehrane na črevesno mikrobioto, je le malo raziskav raziskovalo povezavo med specifičnimi načini prehranjevanja in sestavo črevesne mikrobiote. Cilj naše raziskave je bil ugotoviti, ali bi sestava črevesne mikrobiote na nivoju rodov lahko služila kot zanesljiv kazalnik dolgoročnega načina prehranjevanja.

Metode: V raziskavi je sodelovalo 89 preiskovancev, ki so se prehranjevali na 4 različne načine (vsejedstvo, veganstvo, vegetarijanstvo, prehrana z nizko vsebnostjo ogljikovih hidratov in visoko vsebnostjo maščob) in so bili enakomerno porazdeljeni med skupinami ter izenačeni po spolu, starosti in ITM. Sestavo črevesne mikrobiote smo analizirali s pristopom metabarkodiranja z uporabo hipervariabilne regije V4 gena 16S rRNA. Hierarhično razvrščanje v skupine (angl. »cluster« analiza) na podlagi sestave črevesne mikrobiote na nivoju debel smo izvedli z uporabo združevanja »k-means«. Za razvoj modela in napovedovanje skupin na podlagi spremenljivk smo uporabili klasifikator k-najbližjih sosedov (angl. »k-nearest neighbour classifier«).

Rezultati: Naše ugotovitve kažejo, da sestava črevesne mikrobiote ni ustrezen kazalnik dolgoročnega načina prehranjevanja, z izjemo visoke relativne zastopanosti rodu *Prevotella 9*, ki nakazuje na veganski način prehranjevanja. Kombinacija različnih dejavnikov življenjskega sloga in vnosa specifičnih hranil je bolj pomembna za napovedovanje sestave črevesne mikrobiote kot sam način prehranjevanja. Naš model je pokazal, da je za napovedovanje posameznikovega razvrščanja v skupino glede na sestavo črevesne mikrobiote z 91-odstotno natančnostjo ključnih 26 spremenljivk iz naslednjih kategorij: antropometrične meritve, serumski biomarkerji, dejavniki življenjskega sloga, prebavni simptomi, psihološki dejavniki in specifičen vnos hranil.

Razprava in zaključki: Rezultati poudarjajo pomen kombinacije različnih dejavnikov pri določanju sestave črevesne mikrobiote. Naše ugotovitve bi lahko služile razvoju personaliziranih intervencij z namenom izboljšanja kazalnikov zdravja s spreminjanjem dejavnikov življenjskega sloga, neodvisno od dolgoročnega načina prehranjevanja.

Ključne besede: črevesna mikrobiota, način prehranjevanja, prehrana, dejavniki življenjskega sloga

Gut microbiota composition as a marker of long-term dietary patterns

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Introduction: Understanding the intricate interplay between diet and gut microbiota composition remains a critical area of research. Despite acknowledging the impact of diet on gut microbiota, few studies have investigated the relationship between specific dietary patterns and gut microbiota composition. In this study, we aimed to explore whether gut microbiota composition at the genus level could serve as a reliable indicator of long-term dietary patterns.

Methods: Our cohort comprised of 89 individuals following omnivorous, vegetarian, vegan, and low-carbohydrate, high-fat diets, balanced across groups for age, gender, and BMI. Using a metabarcoding approach targeting the V4 hypervariable region of the 16S rRNA gene, we analyzed gut microbiota composition. Employing K-means clustering at the genus level and a nearest neighbor classifier, we assessed the predictive potential of microbiota clustering classes.

Results: Our findings suggest that, at the genus level, gut microbiota composition may not consistently reflect an individual's dietary pattern, except notably in the case of a vegan diet characterized by a significant relative abundance of the genus *Prevotella* 9. Our predictive model highlights the significance of a set of 26 variables in predicting an individual's microbiota composition cluster with 91% accuracy from the following categories: anthropometric measurements, serum biomarkers, lifestyle factors, gastrointestinal symptoms, psychological aspects, and specific nutrient intake.

Discussion and conclusions: These results underscore the importance of considering a multitude of factors in understanding gut microbiota composition. Our findings could suggest potential strategies for personalized interventions aimed at optimizing health markers by addressing modifiable lifestyle factors, independent of dietary pattern.

Keywords: gut microbiota, dietary pattern, nutrition, lifestyle factors

Sekcija/Section

Preventiva in rehabilitacija

delovno aktivnih in starejših odraslih

Prevention and rehabilitation for working-age
and older adults

Vabljeni predavanje

Vloga elektrodiagnostične ocene pri diagnosticiranju in spremljanju posameznikov z radikulopatijo

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Sedeči življenjski slog in nezdravo vedenje delovno aktivnega prebivalstva sta povezana s povečanjem incidence radikulopatij. Zgodnja diagnostika ter ustrezno in optimalno zdravljenje radikulopatije lahko vplivata na zmanjšanje zapletov. Poleg začetne klinične ocene bolnikov z radikulopatijo so za oceno teh bolnikov pomembne elektrodiagnostične metode. Elektrodiagnostična ocena je na splošno sestavljena iz dveh komponent, vključno z elektronevrografijo (ENG) in elektromiografijo (EMG). Elektrodiagnostika je uporabna pri odkrivanju prisotnosti nevrogene lezije ter stopnje in resnosti nevrogene lezije. Elektrodiagnostično spremljanje ima tudi prognostično vrednost, saj lahko med spremljanjem določene značilnosti kažejo na začetek ponovne inervacije. Zato so lahko elektrodiagnostične študije, opravljene pri bolnikih z radikulopatijo zelo koristne pri prihodnjem načrtovanju zdravljenja in rehabilitacije teh bolnikov. To bo vplivalo na zmanjšanje invalidnosti in doseganje optimalne kakovosti življenja bolnikov z radikulopatijami.

Ključne besede: elektronevrografija, elektromiografija, radikulopatija

Invited lecture

The role of electrodiagnostic assessment in diagnosis and follow-up of individuals with radiculopathy

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Sedentary lifestyle, and unhealthy behaviours in working population are associated with an increase in the incidence of radiculopathies. Early diagnostics as well as adequate and optimal treatment for radiculopathy can influence reduction in complications that are associated with one. Aside initial clinical assessment of patients with radiculopathy, electrodiagnostic methods are important for evaluation of these patients. Electrodiagnostic assessment is composed in general of two components, including electroneurography (ENG) and electromyography (EMG). Electrodiagnostics is useful in detecting the presence of neurogenic lesion as well as the level and severity of neurogenic lesion. Electrodiagnostic evolutions also have prognostic value since over the course of follow up certain characteristics can suggest the onset of reinnervation. Therefore, electrodiagnostic studies performed in patients with radiculopathy can be of great benefit in future treatment planning and rehabilitation of these patients. This will have an impact on disability reduction and achievement of optimal quality of life for the patients with radiculopathies.

Keywords: electroneurography, electromyography, radiculopathy

Učinkovitost pilates vadbe na zmanjšanje kronične nespecifične bolečine v spodnjem delu hrbta

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Uvod: Bolečina v spodnjem delu hrbta je vodilni vzrok nezmožnosti v svetu, ki z naraščanjem in staranjem prebivalstva postaja vse pogostejša. Nespecifična bolečina predstavlja več kot polovico primerov kronične bolečine v spodnjem delu hrbta, ima pomemben vpliv na posameznikovo telesno delovanje, duševno zdravje in kakovost življenja ter ima visoke stroške zdravljenja. Ena izmed možnih intervencij zdravljenja je pilates vadba, katere cilji so povečanje mišične jakosti, vzdržljivosti in gibljivosti ter hkrati ohranjanje stabilnosti trupa. Pilates vadba se pri zdravljenju kronične bolečine v spodnjem delu hrbta vedno pogosteje uporablja, vendar v literaturi ni jasnih dokazov o njenih kratko-, srednje- in dolgoročnih učinkih.

Metode: Znanstveno literaturo na temo pilates vadbe pri kronični nespecifični bolečini v spodnjem delu hrbta smo iskali v podatkovnih bazah PubMed, Web of Science in Scopus s pomočjo ključnih besed »bolečina v spodnjem delu hrbta«, »kronično«, »pilates«. V pregled literature smo vključili randomizirane kontrolirane raziskave, objavljene v zadnjih 10 letih, ki so vključevale posameznike s kronično nespecifično bolečino v spodnjem delu hrbta in so pilates intervencijo primerjale s kontrolnimi skupinami, različnimi tehnikami ali frekvencami pilatesa, in z drugo vadbo. Vključili smo raziskave, ki spremljale tudi kratko-, srednje- in dolgoročne učinke pilates vadbe.

Rezultati: V sistematični pregled literature je bilo vključenih osem raziskav. Pilates vadba je takoj po zaključku intervencije vplivala na večje zmanjšanje bolečine v primerjavi z ekstenzijskimi vajami za hrbet, aerobno vadbo, vajami za krepitev trupa, farmakološkim zdravljenjem in edukacijsko brošuro. Najizrazitejše zmanjšanje bolečine se je izkazalo pri izvajanju pilates vadbe dvakrat tedensko, vendar brez značilnih razlik v primerjavi z vajami za krepitev mišic trupa. Kratkoročno se je pilates vadba izkazala kot učinkovitejša v primerjavi s skupinami brez intervencije, medtem ko so bili značilni srednjeročni učinki na zmanjšanje bolečine ugotovljeni le v eni raziskavi. Dolgoročni učinki pilates vadbe na kronično bolečino v spodnjem delu hrbta niso bili potrjeni.

Razprava in zaključki: Ugotovitve izvedenega sistematičnega pregleda literature nakazujejo, da je pilates vadba na kratki rok učinkovitejša v primerjavi z drugimi intervencijami brez vadbe, vendar ne moremo potrditi njenih srednje- in dolgoročnih učinkov. Potrebni so več randomiziranih kontroliranih raziskav, ki bi preučevale dolgoročne učinke pilates vadbe pri pacientih s kronično nespecifično bolečino v spodnjem delu hrbta.

Ključne besede: pilates, kronična bolečina v spodnjem delu hrbta, nespecifično

The effectiveness of Pilates on reducing chronic non-specific low back pain

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Introduction: Low back pain is the leading cause of disability worldwide and is becoming more common as the population grows and ages. Non-specific pain accounts for more than half of all cases of chronic low back pain and it has a significant impact on an individual's physical functioning, mental health and quality of life, and has high treatment costs. One possible treatment intervention is Pilates, which aims to increase muscle strength, endurance and flexibility while maintaining spinal stability. Pilates is becoming popular in the treatment of chronic low back pain, although there is no clear evidence in the literature on its short-, medium- and long-term effects.

Methods: The scientific literature on Pilates for chronic non-specific low back pain was searched in PubMed, Web of Science and Scopus using the keywords „low back pain“, „chronic“, and „Pilates“. The literature review included randomised controlled trials published in the last 10 years. The population consisted of individuals with chronic non-specific low back pain. Comparison was made between Pilates intervention and control groups, different Pilates techniques or frequencies, and other exercises. We only included studies that also monitored the short-, medium- and long-term effects of Pilates.

Results: Eight studies were included in the systematic literature review. Pilates proved to be more effective in pain management than extension exercises, aerobic exercise, trunk strengthening exercises, pharmacological treatment and an educational brochure immediately after the treatment. Pain was most alleviated with a Pilates frequency of twice a week, but was not more effective compared to general back exercises. Following short-term effects, Pilates was found to be more effective than the no-intervention group. The medium-term effects of Pilates were confirmed in one of the included studies. Moreover, the long-term effects of Pilates on pain were not confirmed.

Discussion and conclusions: The findings of our systematic literature review suggest that Pilates is more effective in the short term compared with other non-exercise interventions, but we cannot confirm its medium- and long-term effects. More long-term randomised controlled trials on the effects of Pilates in patients with chronic non-specific low back pain are needed.

Keywords: pilates, chronic low back pain, non-specific

Pomen kardiološke rehabilitacije po srčnem infarktu: obravnava delovno aktivne in starejše populacije

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Izhodišča in namen: Srčni infarkt je eden od pogostih vzrokov smrti in invalidnosti po vsem svetu in posledičnim pomembnim vplivom na delovno populacijo. Kardiološka rehabilitacija predstavlja ključno fazo okrevanja po srčnem infarktu, saj pomaga bolnikom pri fizični, psihični in socialni reintegraciji ter zmanjšuje tveganje za ponovne srčne dogodke. Posledice srčnega infarkta, kot so daljša odsotnost z dela ali trajna invalidnost, predstavljajo velik javnozdravstveni izziv. Kardiološka rehabilitacija je ključna za ponovno vzpostavitev funkcionalnosti in kakovosti življenja po srčnem infarktu ter predstavlja učinkovito sredstvo sekundarne preventive. Strokovni članek predstavi potek kardiološke rehabilitacije, obravnava pomen za delovno populacijo, poudarja njen vpliv za sekundarno preventivo in opisuje rezultate.

Predstavitev vsebine: Na podlagi strokovnega sodelovanja Univerzitetnega kliničnega centra Ljubljana (v nadaljevanju UKC Ljubljana) z Zavodom za zdravstveno zavarovanje Slovenije (v nadaljevanju ZZZS) je bil v letu 2017 uveden nov zdravstveni program »Ambulantna kardiološka rehabilitacija«. Uvedba novega programa je sledila napredku medicine in farmakoterapije, zlasti na področju obravnave koronarnih bolnikov, ki namesto stacionarne obravnave v okviru naravnega zdravilišča zahteva podaljšano ambulantno rehabilitacijo bolnika po uspešno zaključenemu akutnemu zdravljenju srčnega infarkta v bolnišnici. Izvajalci so se v izvajanje novega programa vključevali postopoma, in sicer najprej UKC Ljubljana kot terciarna ustanova, pristojna za oblikovanje strokovnih usmeritev na tem področju. Nato so izvajanje tega novega programa uspešno pričeli izvajati tudi ostale ustanove, med katerimi tudi Splošna bolnišnica Izola (v nadaljevanju SBI). Za spremljanje, evidentiranje in obračunavanje storitev, ki so izvedene v okviru novega programa, je ZZZS v sodelovanju z Interno kliniko UKC Ljubljana opredelil tudi nov seznam storitev ambulantne kardiološke rehabilitacije ter novo kalkulacijo za planiranje in financiranje novega tima, ki ga sestavlja 5,30 delavcev (iz ur), od tega 1,20 zdravnik specialist (iz ur), 1,50 diplomirana oz. višja medicinska sestra (iz ur) ter 1,50 diplomirani fizioterapevt (iz ur). V SBI izvajamo ambulantno rehabilitacijo z monitorsko kontrolo bolnikov, ki so pravkar preboleli srčni infarkt. Rehabilitacija se izvaja s pomočjo EKG, vključuje pa ogrevanje z aktivnimi in dihalnimi vajami. Pacienti vadijo na cikloergometru 40 minut intervalnega treninga. Lahko pa v vadbo vključimo še 20 minut kontinuiranega treninga na tekaški stezi.

Sklepne ugotovitve: Kardiološka rehabilitacija po srčnem infarktu je ključna za delovno populacijo in predstavlja pomemben del sekundarne preventive. Raziskave kažejo, da je izvajanje kardiološke rehabilitacije učinkovita obravnava sekundarne preventive.

Ključne besede: rehabilitacija, kardiologija, srčni infarkt

The importance of cardiac rehabilitation after a heart attack: treatment of the working and elderly population

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Background and purpose: Heart attack is an important cause of death and disability worldwide, with a significant impact on the working population. Cardiac rehabilitation represents a key phase of recovery after a heart attack, as it helps patients with physical, psychological and social reintegration and reduces the risk of repeated cardiac events. A heart attack represents an important public health challenge, especially among the working population, as it can cause prolonged absence from work or even permanent disability. Cardiac rehabilitation is key to restoring functionality and quality of life after a heart attack and is an effective means of secondary prevention. This article presents the course of cardiac rehabilitation, discusses the importance for the working population, emphasizes its impact for secondary prevention and describes the results.

Content presentation: Based on the professional cooperation of the University Clinical Center Ljubljana (hereafter UKC Ljubljana) with the Institute for Health Insurance of Slovenia (hereafter ZZZS), a new health program “Outpatient Cardiac Rehabilitation” was introduced in 2017. The introduction of the new program followed the progress of medicine and pharmacotherapy, especially in the field of treatment of coronary patients, which instead of inpatient treatment within the framework of a natural spa requires extended outpatient rehabilitation of the patient after successfully completed acute treatment of a heart attack in the hospital. The contractors were involved in the implementation of the new program gradually, namely, first of all, UKC Ljubljana as a research institution responsible for creating professional orientations in this field. Afterwards, the implementation of this new program was successfully implemented by other institutions, including the Izola General Hospital (hereafter SBI). In order to monitor, record and account for the services provided within the framework of the new program, ZZZS in cooperation with UKC Ljubljana, also defined a new list of ambulatory cardiac rehabilitation services and a new calculation for planning and financing the new team, which consists of 5.30 workers (from hours), of which 1.20 doctor specialist (from hours), 1.50 graduate or senior nurse (from hours) and 1.50 graduate physiotherapist (from hours). At SBI, we perform outpatient rehabilitation with monitor control of patients who have just suffered a heart attack. Rehabilitation is carried out with the help of ECG and includes warm-up with active and breathing exercises. Patients exercise on an ergocyclometer for 40 minutes of interval training. We can also include 20 minutes of continuous training on the treadmill.

Conclusions: Cardiac rehabilitation after a heart attack is crucial for the working population and represents an important part of secondary prevention. Research shows that performing cardiac rehabilitation is an effective secondary prevention treatment.

Keywords: rehabilitation, cardiology, heart attack

Učinek vadbi dodanega glukozamina pri osteoartrozi kolena: sistematični pregled in metaanaliza

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Uvod: Osteoartroza je degenerativna bolezen sklepov. Večinoma prizadene večje sklepe, ki nosijo telesno težo, kot so kolki in kolena. Različne vrste vadbe znatno izboljšajo telesno funkcijo in lajšajo bolečino pri osebah z osteoartrozo kolena (OAK). Pogosto uporabljena prehranska dopolnila, kot sta glukozamin (G) in hondroitin (H) so priljubljena pri osebah z OAK, čeprav obstajajo nasprotujoči si dokazi o klinični koristi rabe. Dokazi o učinkovitosti kombinacije vadbe in prehranskih dopolnil na obvladovanje OAK so šibki/nedokončni, zato je bil namen pregledati literaturo na temo dodatnih učinkov G ali G in H v kombinaciji z vadbo na bolečino in gibalne funkcije oseb z OAK.

Metode: Vključitveni in izključitveni kriteriji so bili strukturirani in organizirani glede na orodje PICOS: populacija (P): odrasli > 50 let z OAK; intervencija (I): katerikoli tip vadbe doma ali vadbe v ustanovi v trajanju vsaj 4 tedne v kombinaciji z G ali G kombinirano s H; primerjava (C): kontrolna/placebo skupina (samo vadba); izhodne mere (O): katerikoli test, ki ocenjuje gibalne funkcije in bolečino (instrumentalne ali neinstrumentalne meritve, vprašalniki); dizajn študije (S): intervencijske klinične študije z vsaj dvema skupinama (vadba + G in/ali H in vadba (kontrolna/placebo skupina)). Študije smo iskali v podatkovnih bazah PubMed, Cochrane Central Register of Controlled Trials, PEDro in Web of Science. Kakovost študij smo ocenili s pomočjo Pedro lestvice. Metaanaliza je bila izvedena s programom Review Manager 5.4, pri čemer smo uporabili metodo inverzne variance za neprekinjene rezultate z modelom naključnih učinkov. Velikosti učinka so bile izražene kot standardizirana povprečna razlika (SMD). Za SMD so bili izračunani in poročani 95 % intervali zaupanja. Heterogenost vključenih študij je bila ocenjena z izračunom statistike I^2 . Prag statistične značilnosti za vse analize je bil pri $p \leq 0,05$.

Rezultati: V metaanalizo je bilo vključenih 6 študij (297 preiskovancev). Povprečna kakovost študij je bila ocenjena kot dobra (povprečje = 8,2; razpon = 5–10. Rezultati kažejo, da učinek G ali G in H v kombinaciji z vadbo ni statistično značilno višji od učinka same vadbe, kot sledi iz ocene bolečine (WOMAC bolečina: SMD –0,18, 95% CI –0,47 do 0,11, $p = 0,23$; in VAS bolečina: SMD –0,34, 95% CI –0,85 do 0,17, $p = 0,20$) in telesne funkcije (SMD –0,13, 95% CI –0,95 do 0,69, $p = 0,76$).

Razprava in zaključki: Zaradi velike variabilnosti med dizajni študij težko z gotovostjo ocenimo učinke G in H v kombinaciji z vadbo na simptome OAK v primerjavi s samo vadbo. Potrebni so več raziskave vloge G in/ali H v kombinaciji z vadbo pri obvladovanju bolezni, a zdi se, da dodajanje G z ali brez H v program vadbe pri osebah z OAK nima dodatnega učinka na bolečino in telesno funkcijo v primerjavi z vadbo samo.

Ključne besede: zdravljenje, prehranska dopolnila, telesna aktivnost, starejši odrasli

Effect of added glucosamine to exercise in knee osteoarthritis: a systematic review and meta-analysis

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Introduction: Osteoarthritis is degenerative joint disease and it mainly affects large weight-bearing joints such as hips and knees. Exercise is known to significantly improve physical function and alleviate pain in patients with knee osteoarthritis (KOA). Commonly used symptomatic slow-acting drugs for osteoarthritis such as glucosamine (G) and chondroitin (C) have gained wide popularity for KOA, although there are conflicting findings regarding the clinical benefits of their use. Evidences on the effectiveness of combining exercise and dietary supplements for managing KOA are weak and has not yet been established. The aim was to review the literature on the additional effects of G or G and C in combination with exercise on pain and physical function in patients with KOA.

Methods: Study eligibility criteria were structured and organized according to the PICO tool: a) population: adults aged > 50 years with KOA; b) intervention: any type of home- or institution-based exercise in duration of at least 4 weeks in combination with G or G combined with C; c) comparison: control or placebo group (exercise intervention only); d) outcome: any tests assessing physical function and pain (instrumented and non-instrumented measures and questionnaires); study design: interventional clinical trials with at least two groups (exercise + G and/or C and exercise group). Studies were searched in several online databases: PubMed, Cochrane Central Register of Controlled Trials, PEDro, and Web of Science. Quality assessment of the literature was conducted using the Pedro scale, and meta-analysis was performed using Review Manager 5.4 software. For the meta-analysis, the inverse variance method for continuous outcomes with a random-effects model was used. The effect sizes were expressed as standardized mean difference (SMD). For SMD, the respective 95% confidence intervals were also calculated and reported. Statistical heterogeneity among studies was assessed by calculating I^2 statistics. Statistical significance threshold was set at $p \leq 0.05$ for all analyses.

Results: Six studies, comprising 297 participants, were included in the final analysis. According to the PEDro scale, the average quality of the studies was rated as good (mean=8.2, range=5–10). The results indicated that the combined effect of G, or G and C, with exercise was not significant, as evidenced by the assessed knee pain (WOMAC pain: SMD -0.18, 95% CI -0.47 to 0.11, $p = 0.23$; and VAS pain: SMD -0.34, 95% CI -0.85 to 0.17, $p = 0.20$) and physical function (SMD -0.13, 95% CI -0.95 to 0.69, $p = 0.76$).

Discussion and conclusions: We observed a high variability among study designs, which made it difficult to assess with certainty the effect of G and C in combination with exercise on KOA symptoms compared to exercise alone. More high-quality studies are needed to explore the role of G and/or C combining with exercise in the treatment of disease. However, the inclusion of G with or without C in a KOA exercise program did not seem to make exercise therapy more effective.

Keywords: treatment, dietary supplement, physical activity, older adults

Joga kot ključna praksa za preprečevanje izgorelosti

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Uvod: V vsakdanjem življenju se veliko število ljudi sooča s sindromom izgorelosti. Pomembno je, da posameznik razume, kaj izgorelost je in jo zna prepoznati. V primerjavi z občutkom utrujenosti je izgorelost bolj postopna in povezana s težavami na delovnih mestih. Izgorelost se lahko kaže skozi fizične in psihološke simptome.

Metode: Opravili smo sistematični pregled domače in tuje strokovne literature. Zbiranje in iskanje literature je potekalo v obdobju od septembra 2023 do oktobra 2023, vključili smo v raziskavo članke, ki proučujejo jogo in dihanje. Pri izboru literature smo upoštevali kriterije, kot so prosta dostopnost do člankov, povezanost z izbrano temo in objava med letoma 2013 in 2023. Do nje smo dostopali v podatkovnih bazah PubMed, Medline, ScienceDirect in COBISS.SI. Iskanje je potekalo s ključnimi besedami v slovenščini in angleščini: izgorelost, joga, meditacija, simptomi, intervencija, medicinske sestre, zdravstveni delavci.

Rezultati: Za preprečitev izgorelosti na delovnem mestu je pomembna lastna samooskrba. Spodbujanje samooskrbe z vključevanjem joge v dnevno prakso je pomembno, saj s tem preprečujemo izgorelost in zmanjšujemo stres na delovnem mestu in v domačem okolju. Uvedba joge na delovnem mestu pripomore k umirjenemu in sproščenemu stanju med zaposlenimi. Z jogo posamezniki pripomorejo k boljšemu počutju ob napornih trenutkih. Z omenjeno prakso si posamezniki lajšajo neugodje in pripomorejo k obvladovanju situacije v kateri se nahajajo. Prednost meditacije in dihalne tehnike je, da za to posameznik ne potrebuje posebnega okolja, uporablja se kot samopomoč, izvaja se lahko kjer koli, tudi v delovnem okolju. Ko se oseba znajde v stresni situaciji lahko v trenutku s pravilnim dihanjem in umiritvijo uma pomaga, da jo situacija ne iztiri in privede do stiske. V vsakdanjem življenju dihanje pogosto zrcali naše stanje uma, saj ko smo sproščeni, je dihanje svobodno, globoko in mirno. Stanje vznemirjenosti vpliva na dihanje, ki se kaže kot plitvo, hitro in neenakomerno. S pravilnim dihanjem, ki se ga posameznik nauči s pomočjo joge in tehnike dihanja telo privedemo v stanje, kjer bo v stresnih situacijah pravilno reagiralo.

Razprava in zaključki: Vključevanje joge in meditacije pri posamezniku je ključno za zagotavljanje stabilnega psihofizičnega počutja, zlasti v poklicih, kjer je stres neizogiben. Redna praksa joge lahko prispeva k preprečitvi izgorevanja in prispeva k izboljšanju dobrega počutja pri posamezniku. Organizacije bi morale podpirati te prakse z uvedbo programov za promocijo zdravja, ki vključujejo jogo in meditacijo. Poleg tega bi morale omogočiti posameznikom na delovnih mestih čas in prostor za sprostitev med delovnim časom. Posamezniki bi se v stresnih situacijah pomirili in obnovili svojo energijo, kar bi pozitivno vplivalo na njihovo delo in na kakovost dela, ki ga posameznik opravlja.

Ključne besede: joga, meditacija, stres, delovno mesto

Yoga as a key practice to prevent burnout

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Introduction: Many people experience burnout in their daily lives. It is important that people understand what burnout is and that they can recognise it. Compared to feeling tired, burnout is a gradual process that is linked to problems in the workplace. Burnout can manifest itself through physical and psychological symptoms.

Methods: The literature collection and research took place between September 2023 and October 2023, and we included articles dealing with yoga and breathing. The literature was selected based on criteria such as free accessibility of the articles, relevance to the selected topic and publication between 2013 and 2023. Access was via the PubMed, Medline, ScienceDirect and COBISS.SI databases. The search was conducted using the following keywords in English and Slovenian: burnout, yoga, meditation, symptoms, intervention, nurses, health professionals.

Results: Self-care is important to prevent burnout in the workplace. Promoting self-care by incorporating yoga into daily practise is important to prevent burnout and reduce stress at work and at home. Introducing yoga into the workplace contributes to a calm and relaxed state of mind for employees. Yoga helps individuals feel better in times of stress. The practise helps individuals alleviate their discomfort and cope with their situation. The advantage of meditation and breathing techniques is that they do not require a specialised environment, they are used as a self-help technique and they can be practised anywhere, including the workplace. When a person is in a stressful situation, breathing properly and calming the mind can help prevent the situation from derailing and leading to distress. In everyday life, breathing often reflects our state of mind because when we are relaxed, our breathing is free, deep and calm. A state of excitement affects our breathing, which appears shallow, rapid and irregular. Correct breathing, which you learn through yoga and breathing techniques, brings the body into a state in which it reacts correctly in stressful situations.

Discussion and conclusions: Integrating yoga and meditation into one's practise is crucial for stable psychophysical well-being, especially in occupations where stress is unavoidable. A regular yoga practise can help prevent burnout and contribute to an individual's well-being. Companies should support these practises by introducing health promotion programmes that include yoga and meditation. In addition, they should give people in the workplace time and space to relax during working hours. Individuals would be able to calm down and recharge their batteries in stressful situations, which would have a positive impact on their work and the quality of the work performed.

Keywords: yoga, meditation, stress, workplace

Spremembe miofascijalnih komponent gibanja pri starejših

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Izhodišča in namen: V procesu staranja našega telesa pride do številnih strukturnih in funkcionalnih sprememb na področju mišic in fascije in s tem povezanih sprememb komponent gibanja. Spreminja se tudi vzorec dihanja. Ker se dihanje dogaja v samem središču telesa, lahko različne tehnike dihanja uporabimo kot dodaten element telesne vadbe.

Predstavitev vsebine: Fascija vključuje vse kolagensko fibrozno tkivo, ki kot tridimenzionalna mreža prepleta naše telo. Najnovejša znanstvena dognanja potrjujejo, da je fascija ključnega pomena za zaznavanje našega telesa in skupaj z mišičnim vezivnim tkivom predstavlja delovno enoto, saj mišice ne morejo vzdrževati oblike brez fascijalnega tkiva. Zaradi številnih receptorjev in prostih živčnih končičev ima tudi ključno vlogo pri propriocepciji in zaznavanju bolečine. Pomemben doprinos k razumevanju bolečine v križu so odkritja o spremenjenem drsenju fascijalnih struktur in mišic pri osebah z bolečino v križu, odkritje miofibroblastov, ki so odgovorni za kontraktilne lastnosti torakodvene fascije in odkritje fascijacitov, ki so specializirani za produkcijo s hialuronom bogatega ekstracelularnega matriksa. Vedno več raziskav potrjuje, da ima fascija pomembno vlogo pri prenosu sil po telesu in je zato ključna za prilagodljivost in elastičnost, ter zmogljivost našega telesa. Koncept vadbe Fascial Fitness® (fascijalni fitnes) in fascijalno dihanje je sestavljen iz štirih principov: fascialno sproščanje (angl. fascial release), fascijalno raztezanje (angl. fascial stretch), povrnitev elastične odzivnosti (angl. rebound elasticity), čutno zaznavanje (angl. sensory refinement). Literatura s področja fascijalne vadbe potrjuje, da lahko dobro trenirano vezivno tkivo vpliva na fleksibilnost, omogoča večjo elastičnost pri gibanju, vzpostavlja funkcionalno fascijalno mrežo in dolgoročno preventive bolečin in poškodb. Program vadbe fascijalnega fitnesa in fascijalnega dihanja si prizadeva optimizirati lastnosti našega vezivnega tkiva.

Sklepne ugotovitve: Fascijalno tkivo je ključno pri vsakem našem gibu. Ena njegovih edinstvenih lastnosti je, da ima številne receptorje za raztezanje. To dela fascijo za enega najpomembnejših senzoričnih organov za propriocepcijo. Dobro trenirana fascija lahko vpliva na zmanjšanje bolečin in pripomore k dobremu počutju. Vzdrževanje zdrave in elastične miofascialne mreže notranje enote telesa se začne s kontrolo dihanja, ki definira začetek vsakega telesnega giba. V prihodnosti bodo glede na nova spoznanja in z dokazi podprta znanja o vlogi vezivnega tkiva v našem telesu potrebne posodobitve programov vadbe in gibanja tudi pri starejših.

Ključne besede: fascija, fascijalni fitnes, miofascijalne zakonitosti, dihanje

Changes in myofascial components of movement in the elderly

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Aim: Aging is a one-way process associated with profound structural and functional changes in our bodies, including those in the muscles and fascia, which could be related to changes in movement. The pattern of breathing can also change during aging. Due to the fact that breathing takes place at the core of the body, various breathing techniques can be utilized as an additional component of physical training.

Content: Fascia includes all collagenous fibrous tissue in our body, which works as a three-dimensional network. The latest scientific findings confirm that fascia is crucial for our body shape and awareness; muscles cannot function or maintain their shape without fascial tissue. It plays a key role in proprioception and pain. Significant contributions to understanding lower back pain have been made through the discovery of altered gliding of fascial structures and muscles in individuals with lower back pain, the discovery of myofibroblasts responsible for the contractile properties of the thoracolumbar fascia, and the discovery of fasciocytes specialized in producing a hyaluronic acid-rich extracellular matrix. An increasing number of studies confirm that fascia plays an important role in force transmission throughout the body, making it crucial for the adaptability, elasticity, and performance of our bodies. The concept of Fascial Fitness® and fascial breathing consists of four principles: fascial release, fascial stretch, rebound elasticity, and sensory refinement. Literature in the field of fascial training confirms that well-trained connective tissue can influence flexibility, allows for greater elasticity in movement, establishes a functional fascial network, and provides long-term prevention of pain and injuries. The Fascial Fitness® and fascial breathing movement programs aim to optimize the properties of our connective tissue.

Conclusion: Fascial tissue is crucial in every movement we make. One of its characteristics is having numerous receptors, making fascia one of the richest sensory organs for proprioception. Well-trained fascia can contribute to reducing pain and promoting overall well-being. Maintaining a healthy and elastic myofascial network within our body starts with control of breathing, which defines the beginning of each movement. In the future, evidence-based approach in understanding the role of connective tissue in our bodies, should influence exercise and movement programmes even for older individuals.

Keywords: fascia, Fascial Fitness, miofascia, breathing

Intervencija prizemske adaptacije pri unilateralnem prostorskem neglektu po možganski kapi – sistematični pregled literature

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Uvod: Unilateralni prostorski neglekt (angl. unilateral spatial neglect, USN) je pogost nevrokognitivni sindrom, ki se lahko pojavi po možganski kapi in pogosto vodi v pristranskost vedenja usmerjenega v ipsilezionalno stran. Čeprav je bil včasih njegov pojav povezan le s poškodbo desne hemisfere možganov, danes vemo, da se pojavlja tudi po poškodbi leve hemisfere. USN vključuje primanjkljaje v pozornosti in ni omejen le na prostorsko pristranskost, ampak prizadene tudi različne kognitivne funkcije. Heterogenost sindroma predstavlja izziv, saj ga redko povzroča singularna disfunkcija ali lezija, čemur sledi tudi velik nabor različnih simptomov, ki jih lahko opazimo pri pacientih z USN. Heterogenost pa se odraža tudi v intervencijah, ki se v literaturi pojavljajo v sklopu rehabilitacije USN. Ena bolj raziskanih intervencij je prizemska adaptacija (PA), pri kateri si posamezniki nadenejo očala, ki so opremljena s prizemskimi lečami in nato opravljajo različne vidno-motorične naloge. Leče delujejo tako, da horizontalno premaknejo vidno polje proti ipsilezionalni strani prostora. Cilj pregleda literature je bil preučiti učinke intervencije PA pri pacientih z USN po ishemični ali hemoragični možganski kapi, pri čemer se je posebna pozornost namenjala tako lokaciji možganske lezije in zunanjim vedenjskim simptomom, kot tudi diferenciaciji med alo- in egocentričnim neglektom.

Metode: Iskanje člankov je bilo izvedeno na podatkovnih bazah PubMed, Scopus in PEDro, kjer smo iskali randomizirane kontrolirane raziskave, ki so uporabile terapijo PA pri rehabilitaciji USN pri bolnikih po možganski kapi. Vključitveni kriteriji so zajemali izvirne članke v angleščini od leta 2013 do 2024, osredotočene na študije povezane z ishemično ali hemoragično možgansko kapjo z USN. Izključitveni kriteriji so zajemali študije s farmakološkimi zdravljenji, navzkrižne raziskave, pilotne in izvedljivostne študije ter specifične populacije (travmatična možganska poškodba, pridobljena možganska poškodba, tumorji).

Rezultati: V sistematični pregled je bilo vključenih pet študij s posamezniki s starostjo med 46 in 68 let. Največkrat uporabljene mere izidov za oceno USN in njegovih senzornih in motoričnih simptomov, pred in po intervenciji, so bile Catherine Bergego lestvica, test delitve črte (angl. Line Bisection Test) in različice testa zlomljenih src (angl. Broken Hearts Test), kot tudi test vedenjske nepozornosti (angl. Behavioural Inattention Test). Večina študij (4) poroča o statistično značilnih kratkoročnih učinkih intervencije PA na različne vidike USN. Izmed dveh študij, ki sta preučevali dolgoročne učinke intervencije PA, ena poroča o statistično značilnih dolgoročnih učinkih po obdobju treh mesecev brez intervencije.

Razprava in zaključki: Ugotavljamo, da ima terapija PA potencial, da se prepozna kot učinkovit ukrep za izboljšanje nekaterih vidikov USN. Nadaljnje raziskave so ključnega pomena za izboljšanje parametrov intervencij ter za določanje in poenotenje mer izida, kar lahko vodi v boljši funkcionalni izid za posameznike z USN.

Ključne besede: Enostransko prostorsko zanemarjanje, možganska kap, prizemska prilagoditev, nevrorehabilitacija, CVI, hemispacialno zanemarjanje

Prism Adaptation for unilateral spatial neglect (USN) following stroke – A Systematic Review

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Introduction: Unilateral spatial neglect (USN), a common neurocognitive syndrome following stroke, results in biased behaviour towards the ipsilesional side. Despite its previous association with right hemisphere damage, it occurs after left hemisphere injury as well. USN involves attention deficits and extends beyond spatial bias, affecting to affect various cognitive functions. The syndromes' heterogeneity poses challenges in pinpointing a singular dysfunction or lesion. Patients may exhibit diverse neglect symptoms, supporting a heterogeneous account of visuospatial neglect. The breadth of diversity encompasses more than just the origins, as interventions designed to alleviate the symptoms of USN are equally varied. One of the more researched interventions for USN is Prism Adaptation (PA).

Methods: The main objective was to determine the effects of PA intervention for patients with unilateral spatial neglect (USN) after ischemic or haemorrhagic stroke, taking into account both the location of the brain lesion and the exhibited behavioural symptoms, with a specific focus on discerning between allo- and ego-centric neglect.

The search was conducted on PubMed, Scopus, and PEDro, in which we sought for randomised controlled studies using PA intervention in the rehabilitation of unilateral spatial neglect in stroke patients. Inclusion criteria encompassed original English-language articles from 2013 to 2024, focusing on studies related to ischemic or haemorrhagic stroke with unilateral neglect. Exclusion criteria targeted studies with pharmacological treatments, crossover designs, pilot and feasibility studies, and specific populations (traumatic brain injury, acquired brain injury, tumours).

Results: Five studies were included in this systematic literature review with individuals aged 46-68. Most used outcome measures to assess the severity of USN and its sensory and motor symptoms, pre- and post- intervention, were the Catherine Bergego Scale, Line Bisection Test and variations of the Broken Hearts Test, as well as the Behavioural Inattention Test, among others. Most studies (4) report significant short terms effects of PA on different aspects of USN. Out of the two studies that assessed the long-term effects, one reports significant long-term effects of PA after three months with no intervention,

Discussion and conclusions: In conclusion, PA has potential to be identified as an effective measure for ameliorating some of the various aspects of USN. Moving forward, continued research is vital to refine interventions and to specify and unify the outcome measures, thus possibly improving the functional outcomes for individuals affected by neglect.

Keywords: unilateral spatial neglect, stroke, prism adaptation, neurorehabilitation, CVA, hemispatial neglect

Učinek vadbe mišic medeničnega dna na kronično bolečino v spodnjem delu hrbta

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Uvod: Kronična bolečina v spodnjem delu hrbta negativno vpliva na posameznikovo splošno počutje, zmanjšuje delovno produktivnost in povzroča visoke stroške zdravljenja. Ključno metodo za obvladovanje tovrstne bolečine predstavlja nefarmakološko zdravljenje, med katero uvrščamo tudi fizioterapijo. Ena manj raziskanih fizioterapevtskih metod, ki potencialno prispeva k odpravljanju kronične bolečine v spodnjem delu hrbta, je vadba mišic medeničnega dna, katere učinkovitost smo ugotavljali s pomočjo pregleda literature.

Metode: V sistematični pregled literature so bile vključene raziskave iz podatkovnih baz PubMed in Google Scholar. Pregledane so bile vse študije, ne glede na leto objave, ki so bile napisane v angleškem jeziku in so ustrezale vključitvenim kriterijem: randomizirane kontrolirane raziskave, ki so vključevale osebe s kronično bolečino v spodnjem delu hrbta in so kot intervencijo izvajali vadbo mišic medeničnega dna. Kakovost vključenih raziskav je bila ocenjena s pomočjo PEDro lestvice.

Rezultati: Zastavljenim kriterijem je ustrezalo sedem randomiziranih kontroliranih raziskav, ki so bile vključene v sistematični pregled literature. Povprečna metodološka kakovost vključenih študij je bila ocenjena kot zadovoljiva (> 4) po PEDro lestvici. Rezultati raziskav so pokazali, da se z izvedbo terapije, sestavljene iz standardne fizioterapevtske obravnave (elektroterapija, toplotna terapija, ultrazvočna terapija, vadba jakosti hrbtnih mišic) in vadbe mišic medeničnega dna, statistično značilno zmanjša bolečino ter izboljša funkcionalnost oseb s kronično bolečino v spodnjem delu hrbta. Poleg tega se je omenjena kombinacija izkazala za statistično značilno učinkovitejšo intervencijo kot sama standardna fizioterapevtska obravnava. Kljub vsemu je zmanjšanje kronične bolečine v spodnjem delu hrbta izrazitejše, ko standardni obravnavi dodamo stabilizacijsko vadbo trupa, kot če ji dodamo vadbo mišic medeničnega dna.

Razprava in zaključki: Glavna ugotovitev našega pregleda literature nakazuje, da vključitev vadbe mišic medeničnega dna v standardno obravnavo predstavlja učinkovit pristop za zmanjšanje bolečine ter izboljšanje funkcionalnosti posameznikov s kronično bolečino v spodnjem delu hrbta. V prihodnosti bi bilo smiselno izvesti več visoko kakovostnih randomiziranih kontroliranih študij s širšim spektrom preiskovancev, kar bi omogočilo oblikovanje natančnejših smernic za fizioterapevtski pristop pri obravnavi posameznikov. Poleg tega bi bilo koristno izvesti raziskave, ki bi sledile dolgoročnim učinkom vadbe mišic medeničnega dna na kronično bolečino v spodnjem delu hrbta, s čimer bi lahko bolje razumeli njen dolgotrajen terapevtski potencial.

Ključne besede: bolečina v spodnjem delu hrbta, mišice medeničnega dna, vadba, fizioterapevtska obravnava

The effect of pelvic floor muscle exercises on chronic low back pain

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Introduction: Chronic low back pain represents a major problem for the global population, as it adversely affects individuals' overall well-being, diminishes work productivity and leads to high treatment costs. Non-pharmacological treatment, including physiotherapy, is a key method for managing this type of pain condition. One of the less studied physiotherapy methods that potentially contributes to the management of chronic low back pain is pelvic floor muscle training, the effectiveness of which we evaluated through this literature review.

Methods: In the systematic literature review, randomized controlled trials identified through the PubMed and Google Scholar databases were included. All studies, regardless of the year of publication, written in English language and meeting the inclusion criteria, were reviewed. These criteria included that the studies were randomized controlled trials, with participants being individuals with chronic lower back pain, and that the intervention involved pelvic floor muscle exercises. The quality of included studies was assessed using the PEDro scale.

Results: Seven randomized controlled trials were included in the systematic literature review. Their methodological quality was rated as "fair" (> 4) according to the PEDro scale. The results of the studies showed that a treatment consisting of standard physiotherapy (electrotherapy, thermotherapy, ultrasound therapy, back muscle strengthening exercises) and pelvic floor muscle training significantly reduces pain and improves the functionality of people with chronic low back pain. Furthermore, this combination proved to be significantly more effective intervention than standard physiotherapy treatment alone. Nevertheless, the reduction in chronic low back pain is more pronounced when we add trunk stabilization exercises to standard treatment than when we add pelvic floor muscle exercises.

Discussion and conclusion: The main finding of our literature review suggests that integrating pelvic floor muscle training into standard treatment represents an effective approach for reducing pain and improving functionality in individuals with chronic low back pain. More high-quality randomized controlled trials with a broader spectrum of participants are warranted in order to support the development of more precise guidelines for physiotherapeutic approaches in individual treatment. Additionally, research investigating the long-term effects of pelvic floor muscle training on chronic low back pain would be beneficial for a better understanding of its long-term therapeutic potential.

Keywords: low back pain, pelvic floor muscles, exercise, physiotherapy treatment

Rehabilitacija po zdravljenju na intenzivni enoti

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Izhodišča in namen: V zadnjih nekaj desetletjih je napredek v kritični oskrbi pripomogel k uspešnejšemu zdravljenju bolezni z visoko umrljivostjo, vendar uspehi tovrstnega zdravljenja s seboj prinašajo tudi negativne posledice. Slednje se odraža v kognitivnih motnjah, oslabilih telesnih funkcijah in prizadetemu duševnem zdravju. Gre za t.i. sindrom po intenzivni negi (ang. »Post Intensive Care Syndrom - PICS«), ki prizadene večino preživelih na intenzivni enoti. Namen strokovnega prispevka je izpostaviti pomembnost preprečevanja in zmanjšanja PICS ter pomembnost rehabilitacije po intenzivni negi. PICS se ne odraža zgolj v dolgotrajnih fizičnih in nevropsiholoških težavah, temveč tudi širše - na psihičnem in fizičnem zdravju družinskih članov, stalna uporaba zdravstvenih storitev pa prinaša tudi določene finančne stroške.

Predstavitev vsebine: Bolniki po odpustu iz intenzivne enote lahko trpijo zaradi simptomov PICS. Glavna dva simptoma sindroma po intenzivni negi sta splošna fizična utrujenost, ki je posledica izgube telesne in mišične mase ter tesnoba oziroma depresija. Zato je na tem mestu potrebno izpostaviti pomembnost rehabilitacije za katero v Sloveniji ne obstaja sistemska ureditev. Končni cilj vsake rehabilitacije je zagotavljanje najoptimalnejše vključitve pacienta v vsakdanje življenje in delovno okolje. Vendar pa je vse večji poudarek, da je potrebno preprečevanje PICS že na začetku kritične bolezni. Za zmanjšanje vpliva sindroma so bile preučevane številne intervencije. Izkazalo se je, da usklajen in sinergijski model oskrbe, označen s kratico ABCDEF, zmanjšuje stopnjo umrljivosti in zmanjšuje številne zaplete kritične bolezni, vključno s ponovno hospitalizacijo na intenzivno enoto in odpustom v domove za ostarele in rehabilitacijske ustanove. Ti posamezni procesi združeni v sinergijski model predstavljajo najpomembnejši napredek pri preprečevanju PICS in posledic kritične bolezni v zadnjih dveh desetletjih.

Sklepne ugotovitve: Pomembnost preprečevanja PICS že na začetku kritične bolezni, tudi s pomočjo sinergijskega modela oskrbe ABCDEF, je danes še vedno premalo izpostavljena tematika. Obenem pa bi bilo potrebno večji poudarek nameniti tudi pomembnosti, in posledično dostopnosti, rehabilitacije. Na tem mestu je ključno izpostaviti učinkovitejšo implementacijo obeh

Omenjenih načinov za zagotavljanje dobrobiti pacientov oz. preživelih na intenzivni enoti po akutni bolezni.

Ključne besede: intenzivna enota, kritična bolezen, rehabilitacija, PICS, model ABCDEF

Rehabilitation after treatment in the intensive care unit

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Introduction and purpose: Over the past few decades, advances in critical care have contributed to more successful treatment of diseases with high mortality, but the successes of such treatment also come with negative consequences. The latter is reflected in symptoms such as disturbances in cognitive abilities, physical functions and mental health. It is a so-called post intensive care syndrome (Post Intensive Care Syndrom - PICS), which mostly survived in the intensive care unit have. The purpose of the professional contribution is to highlight the importance of preventing and reducing PICS and the importance of rehabilitation after intensive care. PICS reflects not only in long-term physical and neuropsychological problems, but as well in mental and physical health of family members, and nevertheless the constant use of medical services also brings certain financial costs.

Content presentation: Patients may suffer from PICS symptoms after discharge from the intensive care unit. The two main symptoms of post-intensive care syndrome are general physical fatigue as a result of loss of body weight and muscle mass, and anxiety or depression. Therefore, at this point it is necessary to highlight the importance of rehabilitation, for which there is no systemic regulation in Slovenia. The ultimate goal of any rehabilitation is the development of the remaining potential of the organism to ensure the most optimal integration of the patient into everyday life and the working environment. However, there is increasing emphasis on the need to prevent PICS early in critical illness. A number of interventions have been studied to reduce the impact of the syndrome. The ABCDEF coordinated and synergistic model of care has been shown to reduce mortality and reduce many complications of critical illness, including ICU readmissions and discharges to nursing homes and rehabilitation facilities. These individual processes combined in a synergistic model represent the most important advances in the prevention of PICS and the consequences of critical illness in the last two decades.

Conclusions: The importance of preventing PICS at the beginning of a critical illness, also with the help of the ABCDEF synergistic care model, is still an under-exposed topic today. At the same time, greater emphasis should also be placed on the importance, and consequently accessibility, of rehabilitation. At this point, it is crucial to point out the more effective implementation of both mentioned methods for ensuring the well-being of patients or of survivors in the intensive care unit after an acute illness.

Keywords: intensive care unit, critical illness, rehabilitation, PICS, ABCDEF model

Razlike v upravljanju gibanja vratne hrbtenice med zdravimi odraslimi in starejšimi odraslimi

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Uvod: Vratna hrbtenica je preko živčnega sistema neposredno povezana z vestibularnim in vidnim sistemom ter zagotavlja pomemben proprioceptivni dotok uporabljen za upravljanje gibanja glave in oči ter upravljanje ravnotežja. Do sprememb v delovanju mišic vratu lahko pride zaradi degenerativnih procesov, ki jih lahko spremlja tudi atrofija mišic. Opisane spremembe lahko vplivajo na delovanje proprioceptivnega sistema in posledično na spremenjene vzorce mišične aktivnosti. Spremembe v proprioceptivnem dotoku iz vratne hrbtenice lahko tako vodijo v senzorično neskladje in posledično slabše kinestetično zaznavanje. Pretekle raziskave nakazujejo, da do tovrstnih sprememb prihaja tudi v starosti kot posledica patoloških ali degenerativnih sprememb vratne hrbtenice. Namen raziskave je bil preveriti razlike v upravljanju gibanja vratne hrbtenice s pomočjo Metuljnega testa med zdravimi odraslimi in starejšimi odraslimi osebami.

Metode: V raziskavo je bilo vključenih 32 zdravih posameznikov (16 odraslih, starih 18-65 let in 16 starejših odraslih, starejših od 65 let), ki so izvedli Metuljni test s pomočjo inercialne merilne enote. Med testom so morali preiskovanci z gibanjem glave čim bolj natančno slediti nepredvidljivo premikajoči se referenčni tarči na računalniškem zaslonu (po tri ponovitve na 3 različnih stopnjah težavnosti). Razlike med starostnimi skupinama smo preverjali s pomočjo t-testa za neodvisne vzorce ter v primeru kršenja predpostavk o normalnosti porazdelitve podatkov in/ali enakosti varianc s pomočjo Mann-Whitney U testa, in sicer za naslednje spremenljivke: amplitudna napaka sledenja (AN), čas na referenčni tarči (ČT), zaostajanje (Z) in prehitivanje referenčne tarče (P).

Rezultati: Ugotovili smo statistično značilne razlike med odraslimi in starejšimi odraslimi pri spremenljivkah AN, ČT in Z pri vseh 3 stopnjah težavnosti, pri čemer rezultati kažejo na boljše gibalno upravljanje vratne hrbtenice pri odraslih, medtem ko pri spremenljivki P ni bilo statistično značilnih razlik med skupinama v vseh 3 stopnjah težavnosti.

Razprava in zaključki: Rezultati raziskave kažejo, da je bilo pri starejših odraslih značilno slabše gibalno upravljanje vratne hrbtenice kakor pri odraslih osebah. Glede na pomen vratne hrbtenice za številne senzorično-motorične funkcije lahko primanjkljaji v kinestetičnem zaznavanju vodijo v manj učinkovito gibanje in sposobnost ohranjanja ravnotežja ter morebitno povečano tveganje za padce pri starejših osebah. Posledično bi bilo v prihodnje smiselno preveriti učinek vadbenih programov za izboljšanje kinestezije vratne hrbtenice na izboljšanje različnih senzorično-motoričnih funkcij pri starejših odraslih osebah.

Gljučne besede: vratna hrbtenica, kinestezija, upravljanje gibanja, starejši odrasli

Differences in movement control of the cervical spine between healthy adults and older adults

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Introduction: The cervical spine has important neurophysiological connections to the vestibular and visual systems, providing proprioceptive input for the control of head and eye movements as well as postural stability. Disturbances in neck muscle function may arise due to degeneration and muscle atrophy, which influence the proprioceptive capabilities and cervical muscle activation patterns. Consequently, altered proprioceptive input from the cervical spine can lead to sensory mismatch and thus affect kinaesthetic functions. Previous studies suggest that changes in cervicocephalic kinaesthetic awareness can also occur with ageing as a result of altered cervical afferent input due to pathological and degenerative changes of the cervical spine. The aim of the study was to assess the differences in movement control of the cervical spine using the Butterfly test between healthy adults and older adults.

Methods: The study involved 32 healthy individuals (16 adults, aged 18-65 years and 16 older adults, older than 65 years), who performed the Butterfly test with an inertial measurement unit. During the test, participants were required to accurately track an unpredictably moving target shown on the computer screen with active head and neck movements (three repetitions for 3 different movement path difficulties). The differences between the two age groups were compared using the independent samples t-test and in case of violated assumptions of normality of data distribution and/or equal variances using the Mann-Whitney U test in the following variables: amplitude accuracy (AA), time on target (ToT), undershoot (U) and overshoot (O).

Results: Statistically significant differences between the groups were observed for the variables AA, ToT and U in all three levels of difficulty, with the adults showing better performance in controlling cervical spine movement, while no statistically significant differences were found between the groups for the variable O in all three levels of difficulty.

Discussion and conclusions: The results of the study indicate that older adults show altered movement control of the cervical spine compared to adults. Considering the important role of the cervical spine for different sensorimotor functions, alterations in kinaesthetic awareness could lead to less efficient movement and balance control, and possibly to increased risk of falls in older adults. Therefore, future research should study the effects of cervical spine kinaesthetic training on different sensorimotor functions in older adults.

Keywords: cervical spine, kinaesthesia, movement control, older adults

Vrednotenje mišično-skeletnih in srčno-dihalnih obremenitev med vadbo v vodi: pregled področja

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Uvod: Priljubljenost vadbe v vodi se je v zadnjih dveh desetletjih znatno povečala zaradi pozitivnih lastnosti vodnega okolja kot sta sila vzgona, ki olajša izvajanje vaj in sila upora, ki jo lahko izkoristimo za krepitev mišic ter večjo porabo energije. Za učinkovito izkoriščanje prednosti vodnega okolja je ključno poznavanje mišično-skeletnih (MSO) in srčno-dihalnih obremenitev (SDO), ki jim je telo podvrženo v vodi. Namen tega prispevka je bil sistematično pregledati članke, ki so merili MSO ali SDO med vadbo v vodi oziroma med potopitvijo v vodo.

Metode: Iskanje člankov je potekalo v podatkovni bazi PubMed. V prvi fazi pregleda smo zbrali članke, ki so merili MSO ali SDO med potopitvijo telesa ali vadbo v vodi. Glede na proučevane mere izida smo članke razdelili v pet kategorij: 1) Merjenje sil; 2) Analiza gibanja; 3) Srčno-dihalne meritve; 4) Merjenje mišične aktivnosti; 5) Druge meritve MSO ali SDO. Naredili smo podrobnejši pregled nad značilnostmi raziskav, ki so merile sile reakcije podlage (SRP), mišično aktivnost (MA) in SDO med vadbo v vodi.

Rezultati: Našli smo 247 ustreznih člankov. V podrobnejši pregled smo vključili 118 člankov, od tega jih je 18 proučevalo SRP, 61 SDO in 39 MA med vadbo v vodi. Raziskave ugotavljajo, da je SRP med vadbo v vodi manjša v primerjavi s SRP med vadbo na kopnem. S povečanjem potopitve telesa se SRP zmanjšuje, medtem ko se povečuje pri izvajanju vaj z višjo kadenco oziroma hitrostjo gibanja. Večina raziskav ugotavlja podoben srčni utrip, porabo kisika in zaznano stopnjo napora med vadbo v vodi in na suhem. Avtorji raziskav opažajo tudi, da so SDO med vadbo v vodi in na suhem primerljive pri manjših hitrostih gibanja in postanejo večje na suhem pri večjih hitrostih gibanja. Večina raziskav ugotavlja, da je MA med vadbo v vodi nižja v primerjavi z vadbo na suhem. Zasedimo lahko tudi, da so rezultati primerjav MA med vadbo v vodi in vadbo na suhem odvisni od hitrosti gibanja in merjene mišice.

Razprava in zaključki: Ugotavljamo, da na vseh obravnavanih področjih (SRP, MA in SDO) obstaja potreba po dodatnih raziskovalnih ali preglednih člankih, ki bi prispevali k oblikovanju z dokazi podprte prakse vadbe v vodi.

Ključne besede: vadba v vodi, mišično-skeletne obremenitve, srčno-dihalne obremenitve, sila reakcije podlage, mišična aktivnost

Assessment of musculoskeletal and cardiorespiratory loads during water exercise: an overview of the field

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Introduction: The popularity of exercising in water has increased significantly over the last two decades due to the positive properties of the aquatic environment, such as the buoyancy force, which makes exercises easier to perform, and the drag force, which can be used to strengthen muscles and increase energy expenditure. To effectively exploit the benefits of the aquatic environment, it is essential to be aware of the musculoskeletal (MSL) and cardiorespiratory (CRL) loads to which the body is exposed in water. The aim of this paper was to systematically review articles that measured MSL or CRL during exercise or immersion in water.

Methods: The articles were searched in the PubMed database. In the first phase of the review, we collected articles that measured MSL or CRL during body immersion or water exercise. According to the outcome measures studied, we divided the articles into five categories: 1) Force measurements; 2) Movement analysis; 3) Cardiorespiratory measurements; 4) Muscle activity measurements; 5) Other MSL or CRL measurements. We conducted a more detailed review of the characteristics of the studies that measured ground reaction forces (GRF), muscle activity (MA) and CRL during water exercise.

Results: We found 247 relevant articles. We included 118 articles in a more detailed review, of which 18 examined GRF, 61 examined CRL, and 39 examined MA during aquatic exercise. The studies concluded that GRF is lower during exercise in water than during exercise on land. GRF decreases as the body becomes more immersed, whereas it increases during exercise with higher cadence or speed of movement. Most studies found a similar heart rate, oxygen consumption and perceived exertion during exercise in water and on land. The authors also note that CRLs are comparable for exercise in water and on dry land at lower exercise speeds and increase at higher exercise speeds on dry land. Most studies found that MA is lower during exercise in water than on land. It is also apparent that the results of MA comparisons between water and dry exercises depend on the speed of the movement and the muscle measured.

Discussion and conclusions: We conclude that there is a need for additional research or review articles in all areas examined (GRF, MA and CRL) to contribute to the development of evidence-based practice for aquatic exercise.

Keywords: water exercise, musculoskeletal loads, cardiorespiratory loads, ground reaction force, muscle activity

Pomen rehabilitacije za kakovost življenja žensk po rupturi presredka 3. stopnje med porodom: kvalitativna deskriptivna raziskava

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Uvod: Ena najpogostejših poškodb vaginalnega poroda je poškodba presredka. Hujše poškodbe presredka definiramo kot poškodbe presredka 3. in 4. stopnje. V razviti državi se le te pojavljajo med 0,5–5 %, po podatkih slovenskih raziskav pa je pojavnost v Sloveniji med 0,1–0,8 %. Najpogostejše posledice poškodbe presredka 3. in 4. stopnje so težave z inkontinenco (fekalna inkontinenca, inkontinenca vetrov, urinska inkontinenca) ter bolečina v predelu rane oz. kasneje brazgotine ter presredka samega, kot tudi bolečina v predelu medeničnega dna pri vsakodnevni aktivnostih in/ali spolnih odnosih, kar lahko močno vpliva na kakovost življenja žensk takoj po porodu in kasneje. Namen naše raziskave je bil proučiti doživljanje rehabilitacije oziroma fizioterapevtske obravnave ter vpliv le te na spremembo kakovosti življenja po poškodbi presredka 3. stopnje.

Metode: Uporabljena je bila kvalitativna deskriptivna metoda. Podatki so bili zbrani z delno strukturiranimi, individualnimi intervjuji. Namenski vzorec vključuje 11 žensk, ki so med vaginalnim porodom utrpeli rupturo presredka 3. stopnje, kar je navedeno v odpustnici porodnišnice ali je bilo ugotovljeno z endoanalnim ultrazvokom. Podatki so bili analizirani s pomočjo metode analize vsebine.

Rezultati: Na podlagi poročanja o izkušnjah fizioterapevtske obravnave smo zaznali, da ženske pred prvo fizioterapevtsko obravnavo pogosto niso vedele, kaj od nje lahko pričakujejo. Nekatere so izrazile občutke strahu in napetosti, predvsem zaradi skrbi glede morebitne bolečine med pregledom v predelu brazgotine. Večina udeleženk je opisala, da so na prvi fizioterapevtski obravnavi prejele obsežne informacije in se počutile, kot da so bile prvič res slišane. Kljub temu je večina žensk doživljala zadržanost pri razkrivanju vseh simptomov, zlasti težav z uhajanjem blata in vetrov ter bolečine med spolnimi odnosi, nekatere pa so o teh težavah spregovorile šele v poznejših fazah obravnave. Štiri pacientke so bile pozitivno presenečene nad celostnim pristopom. Tri pa so poudarile, da jih je zmotila odsotnost dosledne prisotnosti iste osebe (fizioterapevta) med različnimi obravnavami, predvsem zaradi različnih pristopov. Kljub temu so pohvalile zagotavljanje intimnosti med terapijami. Vse udeleženske so poročale o opaznem izboljšanju simptomov po zaključeni fizioterapevtski obravnavi, kar je imelo posledično pozitiven vpliv na njihovo kakovost življenja, vključno z vrnitvijo k vsakodnevnim telesnim aktivnostim, kot so tek, skakanje in plavanje, ter tudi izboljšanjem odnosa s partnerjem, predvsem na področju spolnosti. Na koncu so izpostavile, da bi morala biti ozaveščenost žensk o tovrstnih poškodbah in možnostih rehabilitacije večja.

Razprava in zaključki: Vloga fizioterapevta pri celostni obravnavi žensk po porodu z rupturo presredka 3. stopnje je zelo pomembna, s fizioterapevtsko obravnavo žensk po taki poškodbi med porodom ne le omogočajo obnovo funkcionalnosti, temveč tudi izboljšujejo kakovost življenja pacientk. Hkrati izpostavljamo pomen nadaljnjih raziskav in sodelovanja med strokovnjaki za nenehno izboljšanje pristopov k tej pomembni zdravstveni problematiki.

Ključne besede: porod, ruptura presredka, kakovost življenja, zdravje žensk

The Importance of Rehabilitation for the Quality of Life of Women After a Third-Degree Perineal Tear During Childbirth: A Qualitative Descriptive Study

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Introduction: One of the most common injuries during vaginal childbirth is perineal trauma. Severe perineal injuries are classified as third- and fourth-degree tears. In developed countries, the incidence of these injuries ranges from 0.5% to 5%, while Slovenian studies report an incidence of 0.1% to 0.8%. The most common consequences of third- and fourth-degree perineal tears include issues with incontinence (fecal incontinence, flatulence incontinence, urinary incontinence), pain in the wound or scar area, and perineal pain. Additionally, there is often pain in the pelvic floor region during daily activities and/or sexual intercourse, which can significantly affect women's quality of life immediately postpartum and later. The aim of our study was to investigate the experience of rehabilitation or physiotherapy treatment and its impact on the quality of life after a third-degree perineal tear.

Methods: A qualitative descriptive method was used. Data were collected through semi-structured individual interviews. A purposive sample included 11 women who sustained a third-degree perineal tear during vaginal childbirth, as noted in the hospital discharge summary or confirmed by endoanal ultrasound. Data were analyzed using content analysis.

Results: Based on reports of their physiotherapy experiences, we found that women often did not know what to expect from their first physiotherapy session. Some expressed feelings of fear and tension, mainly due to concerns about potential pain during the examination of the scar area. Most participants described receiving extensive information during their first session and felt truly heard for the first time. However, many women were hesitant to disclose all their symptoms, particularly issues with fecal incontinence, flatulence, and pain during sexual intercourse, with some only discussing these issues in later sessions. Four patients were positively surprised by the holistic approach, while three were bothered by the lack of consistent presence of the same therapist across different sessions, mainly due to varying approaches. Despite this, they appreciated the maintenance of intimacy during therapies. All participants reported noticeable improvement in symptoms after completing physiotherapy, which had a positive impact on their quality of life. This included a return to daily physical activities such as running, jumping, and swimming, as well as improved relationships with their partners, especially in terms of sexual health. They emphasized that awareness of such injuries and rehabilitation options should be greater.

Discussion: The role of the physiotherapist in the comprehensive treatment of women after childbirth with a third-degree perineal tear is very important. Physiotherapy not only restores functionality but also improves the quality of life of patients. We also highlight the importance of further research and collaboration among professionals to continuously improve approaches to this significant health issue.

Keywords: childbirth, perineal tears, quality of life, women's health

Učinkovitost vadbe pilates na kvaliteto življenja pri starejši ženski populaciji

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Uvod: Svetovne demografske spremembe, ki smo jim priča v zadnjem času kažejo stalno povečevanje deleža starejše odrasle populacije. Ta demografski razvoj ima močan družbeni, politični in gospodarski vpliv in je pokazatelj družbene transformacije 21. stoletja. Demografske spremembe postavljajo v ospredje nujnost spodbujanja zdravega staranja in ukrepov za izboljšanja kakovosti življenja starejših odraslih. Ženske v poznejšem odraslem obdobju se pogosto srečujejo z edinstvenimi izzivi, povezanimi tako s telesno pripravljenostjo in tudi duševnim zdravjem. Fizična aktivnost lahko pomaga zmanjšati hitrost upada v psihofizičnem počutju, povečati in/ali ohraniti funkcionalno zmogljivost in izboljšati fizične zmogljivosti (npr. moč, ravnotežje in prožnost) tudi v visoki starosti. Iz tega vidika lahko telesna dejavnost predstavlja enega ključnih dejavnikov za ohranjanje in izboljšanje splošnega zdravja pri starejših odraslih, saj lahko zmanjša neposredni vpliv kronološke starosti na zmanjšanje biopsihosocialnih funkcij, povezane s staranjem. Med široko paleto načinov vadbe dobiva pilates čedalje več pozornosti zaradi svojega celostnega pristopa k telesni pripravljenosti, ki poudarja moč trupa, prožnost, držo in povezavo med umom in telesom.

Metode: Ta prispevek je vključeval pregled literature v več bazah člankov (PubMed, Web of Science and Scopus) v novembru 2023. Uporabili smo ključne besede za iskanje: (Pilates AND (elderly women OR older women)). Po izločitvi podvojenih vnosov smo avtorji posamično pregledali naslove in povzetke na podlagi vnaprej določenih vključitvenih kriterijev. 24 člankov, ki so izpolnjevali omenjene kriterije, je bilo pregledanih v celoti in so bili vključeni v ta pregled.

Rezultati: Učinke vadbe pilatesa smo razdelili na 5 kategorij ravnotežje in rizik padca, emocionalno in mentalno zdravje, metabolni parametri, kognitivne funkcije in kvaliteta življenja. Študije so večinoma pokazale izboljšanje ravnotežja in zmanjšano tveganje padca pri starejših odraslih ženskah z obravnavanjem moči jedra, stabilnosti in koordinacije. Pilates pomaga krepiti tudi mišice, ki igrajo ključno vlogo pri ravnotežju. To lahko privede do večjega občutka zavedanja in nadzora telesa, kar na koncu izboljša ravnotežje tako pri dnevnih aktivnostih kot pri športni uspešnosti. Redna vadba pilatesa lahko pomaga tudi pri preprečevanju padcev, zlasti pri starejših odraslih, saj izboljša stabilnost in zmanjša tveganje za poškodbe.

Razprava in zaključki: Odrasle starejše ženske se soočajo z raznolikimi fiziološkimi spremembami, kot so izguba mišic, zmanjšana kostna gostota, zmanjšana prožnost in slabše ravnotežje, kar lahko vse prispeva k povečanemu tveganju padcev, zlomov in funkcij. Pilates, ki se osredotoča na nadzorovane gibe, dihanje in poravnavo, predstavlja možnost vadbe nizke intenzitete, ki lahko pomaga pri učinkovitejšemu soočanju z izzivi, povezanih s starostjo, ter prinaša izboljšano telesno in duševno počutje. Študije jasno kažejo, da je vadba pilatesa prispevala k izboljšavam na številnih področjih, ki vplivajo na kakovost življenja starejših odraslih žensk, kot so kakovost spanja, tesnoba, depresija in utrujenost, ravni hormonov, kardio-respiratorna kondicija in psihološko stanje ter preprečevanje padcev in funkcionalno ravnovesje.

Ključne besede: odrasle starejše ženske, pilates, vadbena intervencija, biopsihosocialne funkcije starejših

Effectiveness of Pilates Exercise on Quality of Life in Older Adult Women

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Introduction: The global demographic landscape is undergoing a significant transformation characterized by a steady increase in the proportion of older adult individuals. This demographic evolution has a strong social, political, and economic impact and is an indicator of the social transformation of the 21st century. This demographic shift brings to the forefront the imperative of promoting healthy aging and enhancing the quality of life for older adults. Women often face unique challenges related to physical fitness and mental well-being during later years. Physical activity may help reduce the speed of this decline, raising or maintaining the intrinsic and functional capacity by improving physical capacities (e.g., strength, balance, and flexibility) also with advanced age. In this context, physical activity can represent one of the pivotal factors for maintaining and improving overall health in the older adults as it may minimize the direct influence of chronological age on the loss of bio-psychosocial function associated with ageing. Among the diverse array of exercise modalities available, Pilates has received increasing attention for its holistic approach to fitness, emphasizing core strength, flexibility, posture, and mind-body connection.

Methods: This article is a literature review where multiple databases of scientific literature (PubMed, Web of Science and Scopus) were searched in November 2023 without regard to the date of publication. We used the following combination of search key words: (Pilates AND (elderly women OR older women)). Upon eliminating duplicate entries, the authors individually screened titles and abstracts based on pre-established eligibility criteria. 24 articles that satisfied these criteria underwent full-text examination and were included in this paper.

Results: We divided the effects of Pilates into 5 categories: balance and fall risk, emotional and mental health, metabolic parameters, cognitive functions and quality of life. Studies have mostly shown improvement in balance and reduced fall risk in older adult women by addressing core strength, stability, and coordination. Pilates also helps strengthen the muscles that play a key role in balance. This can lead to a greater sense of body awareness and control, which ultimately improves balance in both daily activities and athletic performance. Regular practice of Pilates in older adult women can also help to prevent falls by improving stability and reducing the risk of injury.

Discussion and conclusion: As women age, they are confronted with physiological changes such as muscle loss, decreased bone density, reduced flexibility, and compromised balance, all of which can contribute to an increased risk of falls, fractures, and functional. Pilates, with its focus on controlled movements, breathwork, and alignment, presents a low-impact exercise option that can help address these age-related challenges and brings an improved physical and mental well-being in older adult women. Pilates exercise programs have shown to bring improvements in many areas that affect the quality of life in older adult women, such as sleep quality, anxiety, depression, and fatigue, in hormone levels, cardiorespiratory fitness and psychological function, in fall prevention and functional balance. Regular practice of Pilates in older adult women can also help to prevent falls by improving stability and reducing the risk of injury. In regards to the current and future demographic changes, the benefits of Pilates for older adult women still remains an area of research interest and clinical relevance.

Keywords: older adult women, pilates, exercise intervention, biopsychosocial functions in elderly

Obnavljanje izzivov starajočega se prebivalstva: vpogled v program vadbe Okoljski dejavniki

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Uvod: Do leta 2060 bo povprečna starost državljana Evropske unije dosegla 47,2 leta, pri čemer bodo posamezniki stari 65 let in več predstavljali skoraj 30 % prebivalstva, kar bo znatno povečanje v primerjavi s 16 %, zabeleženimi leta 2010. Pričakuje se, da bo trend, ki ga poganja padajoča stopnja rodnosti dodatno zmanjšal delež delovno sposobnega prebivalstva, kar bo povzročilo nadaljnjo rast prebivalstva starega 65 let in več, potencialno za do dva milijona letno. Za ustrezno obravnavo potreb starajočega se prebivalstva v urbanih okoljih je nujno razumevanje prevladujočih metod širjenja informacij in obiskovanja vadbenih programov. Okoljski dejavniki, ki so v raziskavah pogosto spregledani, pomembno vplivajo na kakovost življenja in zdravje posameznika. Medtem ko lahko nekateri okoljski dejavniki ovirajo udeležbo starejših odraslih v programih vadbe, na primer težaven teren ali težave s prevozom, lahko drugi to olajšajo, na primer bližina prizorišč dejavnosti, dostopna počivališča ob poti, razpoložljivost javnega prevoza in učinkovito razširjanje informacij o razpoložljivih programih.

Metode: Presečna študija, izvedena od novembra 2018 do marca 2019, je zajela 200 posameznikov, starih 65 let in več, ki so sodelovali v brezplačnih programih vadbe. Večina je bila žensk (190), moških le 10. V raziskavi je bil uporabljen splošni vprašalnik, ki temelji na 'Vprašalniku za starejše' in ga je razvil Gerontološki center Zavoda za javno zdravstvo Grada Zagreba. Vprašalnik je sestavljen iz treh sklopov vprašanj: splošni del, zdravje in zdravstveno stanje ter kakovost življenja.

Rezultati: Raziskava je pokazala, da je večina sodelujočih (74,0 %) o vadbenih programih izvedela preko osebnih poznanstev ali stikov preko društev upokojencev ali med predprijavami v domove za upokojence. Le majhen odstotek vzorca (4,5 %) je izvedel za programe prek interneta, kar poudarja omejeno internetno pismenost med udeleženci programa. Dostopnost lokacij programa je pomembno vplivala na udeležbo, saj je 83,0 % udeležencev prišlo peš, kljub temu, da je javni prevoz uporabljalo le 10,0 % udeležencev.

Razprava in zaključek: Neposredni osebni stik ostaja najučinkovitejši način širjenja informacij med starejšimi odraslimi. Dostopnost se je izkazala kot ključni dejavnik pri oblikovanju programa za spodbujanje udeležbe v dejavnostih, ki spodbujajo zdravje, kot je vadba. Fizioterapevti in drugi zdravstveni delavci se soočajo z novimi izzivi zaradi povečanih zahtev in stroškov, povezanih z oskrbo starejših. Za vključitev večjega števila starejših v vadbene programe so nujni lahko dostopni programi znotraj lokalne skupnosti z jasnim informiranjem.

Ključne besede: oskrba starejših, vadbeni programi, dostopnost, fizioterapija

Addressing the Challenges of Aging Populations: Insights from Exercise Program Environmental Factors

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Introduction: By the year 2060, the average age of a citizen in the European Union will reach 47.2 years, with individuals aged 65 and older constituting nearly 30% of the population, a significant increase from the 16% recorded in 2010. Continuation of this trend, driven by declining birth rates, is expected to further reduce the proportion of the working-age population, leading to a continued rise in the population aged 65 and above, potentially by up to two million annually. To adequately address the needs of the aging population in urban settings, it is imperative to understand the prevailing methods of information dissemination and attendance at exercise programs. Environmental factors, often overlooked in research, significantly impact individual's quality of life and health. While some environmental factors may hinder older adult's participation in exercise programs, such as difficult terrain or transportation issues, others can facilitate it, such as proximity to activity venues, accessible rest areas along the way, availability of public transportation, and effective distribution of information about available programs.

Methodology: A cross-sectional study conducted from November 2018 to March 2019 included 200 individuals aged 65 and older participating in free exercise programs. The majority were female (190), with only 10 males. A general questionnaire based on the 'Questionnaire for Elderly Persons,' developed by the Center of Gerontology, Public Health Institute of the City of Zagreb, and consists of three sets of questions: general section, health and health status, and quality of life., administered in a traditional pen-and-paper format, was utilized for data collection.

Results: The study revealed that most participants (74,0%) learned about exercise programs through personal acquaintances or contacts via retirement associations or during pre-registration for retirement homes. Only a small percentage (4.5%) learned about the programs through the internet, highlighting the limited internet literacy among program participants. Accessibility of program locations significantly influenced participation, with 83.0% of participants arriving on foot, despite the availability of public transportation used by only 10.0% of participants.

Discussion and Conclusion: Direct personal contact remains the most effective means of information dissemination among older adults. Accessibility emerged as a critical factor in program design to promote participation in health-promoting activities like exercise. Physiotherapists as well as other health professionals face new challenges due to increased demands and costs associated with providing care to the elderly. To engage a larger number of older adults in exercise programs, easily accessible programs within the local community, with clear information dissemination, are essential.

Keywords: elderly care, exercise programs, accessibility, physiotherapy

Sekcija/Section

Problemi, izzivi in priložnosti na področju zdravja delovno aktivnih in starejših odraslih

Concerns, challenges and opportunities in the health
of working-age and older adults

Vabljen predavanje

Težave, izzivi in priložnosti na področju zdravja starejših delavcev

Dani Mirnik

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Izhodišča in namen: Zdravje delovno aktivnih starejših odraslih predstavlja eno ključnih področij javnega zdravja, ki zahteva celosten in interdisciplinaren pristop. Zaradi demografskih sprememb in staranja prebivalstva postaja nujno oblikovanje strategij za zagotavljanje kakovostnega in zdravega staranja. V tem povzetku bomo obravnavali ključne težave, izzive in priložnosti na področju zdravja delovno aktivnih starejših delavcev z namenom izboljšanja njihovega zdravstvenega stanja, ohranjanja delazmožnosti in kakovosti življenja.

Predstavitev vsebine: S starostjo narašča incidenca različnih bolezni, kar rezultira v višjem bolniškem staležu, invalidnosti in ostalih težavah, ki so posredno vezane na delazmožnost (produktivnost, splošno počutje, itd.). Med delovno aktivno starejšo populacijo so pogostejše kronične bolezni, kot so kardiovaskularne bolezni, diabetes in bolezni dihal, kostno-mišične bolezni, duševne motnje, kot depresija, anksioznost in druge ter bolniški stalež. Te bolezni ne vplivajo le na posameznikovo zdravje, temveč imajo tudi široke ekonomske posledice, vključno z višjimi stroški zdravstvene oskrbe in zmanjšano produktivnostjo. Pomanjkanje znanja o zdravem načinu življenja in obvladovanju kroničnih bolezni je bolj pogosto med delovno aktivnimi starejšimi odraslimi kot med mlajšimi generacijami. Izobraževalni programi, prilagojeni tej populaciji, so ključni za izboljšanje njihovega zdravja. V Sloveniji imajo načeloma vsi zaposleni dostop do storitev medicine dela. Razvoj telemedicine in drugih digitalnih zdravstvenih rešitev ponuja priložnosti za boljši dostop in izkoristek do zdravstvene oskrbe. Te tehnologije lahko omogočijo boljše spremljanje kazalnikov zdravja delavcev in pomagajo pri oblikovanju ustreznih strategij ter razvoj strok za ustrezne multidisciplinarne pristope. Pomemben aspekt je ustrezna promocija zdravja pri delu, saj vlaganje v preventivne programe, kot so ustrezni zdravstveni pregledi in promocija zdravega življenjskega sloga lahko znatno zmanjša breme kroničnih bolezni, izboljša kakovost življenja in ohranja delazmožnost.

Sklepne ugotovitve: Obravnava zdravstvene politike starejših zaposlenih zahteva celosten pristop. Oblikovanje politik, ki podpirajo zdravo staranje in vključevanje starejših v družbo, je ključnega pomena. To vključuje prilagajanje delovnih mest potrebam starejših delavcev, zagotavljanje dostopnih zdravstvenih storitev in spodbujanje aktivnega staranja. Zavedanje o pomembnosti teh vidikov in njihovo vključevanje v strategije javnega zdravja lahko prispeva k bolj zdravi in vključujoči družbi, ki bo omogočala kakovostno staranje za vse.

Ključne besede: promocija zdravja, aktivno staranje, starejši odrasli

Invited lecture

Problems, challenges and opportunities in the field of older workers' health

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Background and purpose: The health of older workers is one of the key areas of public health that requires an integrated and interdisciplinary approach. Due to demographic changes and the ageing of the population, it is necessary to develop strategies to ensure quality and healthy ageing. In this summary, we will discuss the main problems, challenges and opportunities in the field of older workers' health with the aim of improving their health, maintaining their ability to work and improving their quality of life.

Content presentation: The incidence of various diseases increases with age, resulting in a higher number of patients, disabilities and other problems that are indirectly related to the ability to work (productivity, general well-being, etc.). Among the working older population, chronic diseases such as cardiovascular diseases, diabetes and respiratory diseases, musculoskeletal disorders, mental disorders such as depression, anxiety and others, as well as the sick population are more prevalent. These diseases not only affect the health of individuals, but also have far-reaching economic consequences, including higher healthcare costs and lower productivity. Lack of knowledge about healthy lifestyles and chronic disease management is more prevalent among working older adults than among younger generations. Educational programmes tailored to this population group are key to improving their health. In Slovenia, in principle, all employees have access to occupational health services. The development of telemedicine and other digital health solutions offers opportunities for better access and utilisation of healthcare. These technologies can enable better monitoring of workers' health indicators and help in the formulation of appropriate strategies and the development of expertise for appropriate multidisciplinary approaches. An important aspect is the appropriate promotion of health in the workplace, as investment in prevention programmes such as appropriate medical check-ups and the promotion of healthy lifestyles can significantly reduce the burden of chronic disease, improve quality of life and maintain employability.

Conclusions: Dealing with health policies for older workers requires a holistic approach. Designing policies that support healthy ageing and the inclusion of older people in society is crucial. This includes adapting the workplace to the needs of older workers, providing accessible health services and promoting active ageing. Awareness of the importance of these aspects and their inclusion in public health strategies can contribute to a healthier and more inclusive society that enables quality ageing for all.

Keywords: health promotion, active aging, older adults

Neadherenca za zdravila pri starejših odraslih v domačem okolju ter ukrepi medicinske sestre

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Uvod: Populacija v svetu se stara, narašča število odkritih kroničnih obolenj in posledično število zdravil, ki jih posameznik prejema. Neadherenca za zdravila pri starejših, ki živijo v domačem okolju, je v literaturi šibko opisana. Namen prispevka je opisati neadherenco za zdravila ter ugotoviti intervencije, s katerimi medicinska sestra lahko prepreči ali pa ustavi ta pojav pri starejših odraslih, ki živijo doma.

Metode: Izveden je bil pregled domače in tuje znanstvene literature v podatkovnih bazah CINAHL, PubMed, Medline in ScienceDirect s sledečimi iskalnimi pojmi: aderenza, starejši odrasli, domače okolje, medication adherence, medication compliance, home environment, aged. Iskanje ni bilo omejeno s tipom raziskave, sledili smo recenziranim objavam od leta 2014 do 2024. Postopek iskanja, pregleda in izbire člankov je bil izveden s pomočjo diagrama PRISMA. Izvedli smo kritično oceno člankov in vsebinsko analizo podatkov.

Rezultati: Od začetnih 462 smo v končno analizo vključili 18 člankov. Ugotovili smo, da neadherenca za zdravila izhaja iz dejavnikov, vezanih na pacienta, na zdravila ali na zdravstveni sistem. Na podlagi vzrokov medicinska sestra izvaja kombiniran pristop obravnave neadherence za zdravila z aktivno vključitvijo pacienta (starejšega odraslega) v obravnavo na področju znanja in prepričanj, komunikacije in motiviranja, prilagajanja terapevtskega režima, uporabe različnih pripomočkov, opomnikov in pomoči svojcev, prijateljev ter socialno varstvenega sistema.

Razprava in zaključki: Zdravstveni delavci morajo prepoznati možnost neadherence za zdravila pri starejšemu pacientu in prilagoditi navodila ter ukrepe njegovemu znanju, prepričanjem in kulturnemu okolju. Obstaja širok nabor ukrepov, ki se jih medicinske sestre lahko poslužijo s ciljem zmanjšanja neadherence za zdravila pri starejših odraslih, ki živijo doma. Ob trendu polimorbidnosti in s tem polifarmacije bi lahko s kombinacijo ukrepov (kot so motiviranje, poučevanje, podporen odnos in individualizirano spremljanje) ter z izbiro ustreznih pripomočkov pomembno prispevali k zmanjševanju neadherence in s tem k boljšim izidom zdravljenja.

Gljučne besede: aderenza; domače okolje; starejši odrasli; zdravstvena nega, intervencije

Medication non-adherence in older adults in the home environment and nurse interventions

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Introduction: The world's population is ageing; the number of chronic diseases being diagnosed is increasing and the number of medicines being administered is rising. Medication non-adherence in older adults living in the home environment is poorly described in the literature. The aim of this paper is to describe medication non-adherence and to identify interventions that nurses can use to prevent or stop this phenomenon in older adults living at home.

Methods: A review of domestic and foreign scientific literature was conducted in CINAHL, PubMed, Medline and ScienceDirect databases using the following search terms: adherence, older adults, home environment, medication adherence, medication compliance, home environment, aged. The search was not limited by the type of study, and peer-reviewed publications from 2014 to 2024 were tracked. The process of searching, screening and selecting articles was performed using the PRISMA flowchart. We performed a critical appraisal of the articles and content analysis of the data.

Results: We found that medication non-adherence was due to patient-related, drug-related or health system-related factors. Based on the causes, the nurse implements a combined approach to the management of medication non-adherence by actively involving the patient (older adult) in the management in the areas of knowledge and beliefs, communication and motivation, adjustment of the therapeutic regimen, use of different aids, reminders and help from family, friends and the social care system.

Discussion and conclusions: Healthcare professionals need to recognize the possibility of medication non-adherence in the older patient and tailor instructions and interventions to the patient's knowledge, beliefs and cultural background. There is a wide range of interventions that nurses can use with the aim of reducing medication non-adherence in older people living at home. With the trend towards polymorbidity and thus polypharmacy, a combination of activities (such as motivation, teaching, supportive attitudes and individualized monitoring) and the choice of appropriate devices could make an important contribution to reduce medication non-adherence and thus to improve treatment outcomes.

Keywords: medication adherence; home environment; older adults; health care, interventions

Obporodna zdravstvena oskrba: izkušnje žensk v Sloveniji in izbranih državah Evrope

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Uvod: Izkušnje žensk z oskrbo v porodnišnici so izjemnega pomena, saj jih te lahko opolnomočijo ali pa povzročijo škodo, negativno ali travmatično izkušnjo, zato so prizadevanja za kakovostno, spoštljivo in na dokazih utemeljeno obporodno oskrbo zelo pomembna. Mednarodna raziskava IMAGiNE EURO se posveča kakovosti oskrbe mater in novorojenčkov v porodnišnicah. Predstavljamo in primerjamo rezultate izbranih evropskih držav presečne študije IMAGiNE EURO, ki raziskuje izkušnje žensk z obporodno oskrbo v porodnišnicah.

Metode: Podatke smo zbrali s pomočjo strukturiranega spletnega vprašalnika, ki temelji na 40 kazalnikih kakovosti na podlagi dokumenta Svetovne zdravstvene organizacije - *Standardi za izboljšanje kakovosti oskrbe mater in novorojenčkov v zdravstvenih ustanovah*, 2016. Vprašalnik zajema 4 kategorije: zagotavljanje oskrbe, izkušnje z oskrbo, razpoložljivost človeških in drugih virov; dodatno področje vključuje ključne organizacijske spremembe med pandemijo covid-19. Vsaka kategorija zajema 10 kazalnikov kakovosti, ki sestavljajo skupen kazalnik kakovosti obporodne oskrbe mater in novorojenčkov – Quality of Maternal and Newborn Care Index (QMNC), katerega najvišja vrednost je 400 točk. Predstavljamo poročanja žensk iz 12 evropskih držav, ki so rodile od 1.3.2020 do 15.3.2021, s poudarkom na izkušnjah slovenskih porodnic. Slovenski vzorec zajema 2.092 žensk, skupni pa 21.027 žensk.

Rezultati: Po skupnem kazalniku kakovosti se Slovenija s 320 točkami, med 12 sodelujočimi državami, uvršča na sredino. Najvišje število točk dosega Luksemburg - 355, najnižje pa Srbija - 205. Na nekaterih področjih obporodne oskrbe dosegamo dobre rezultate, na nekaterih področjih pa so potrebne izboljšave, predvsem v zvezi z avtonomijo mater, spoštovanjem in čustveno ter praktično podporo. Pri nas več kot polovica (51,6 %) žensk poroča, da se med porodom niso mogle prosto gibati, na Norveškem je o tem poročalo le 7,9 % žensk. 61,6 % slovenskih porodnic poroča, da pri vaginalnem porodu niso imele proste izbire porodnega položaja, to poroča 32,4 % žensk v Italiji. 29,8 % žensk, ki so rodile v Sloveniji, poroča, da niso prejele čustvene podpore; 30,6 % jih poroča, da niso bile vključene v odločitve, ki se tičejo njih samih. Rezultati raziskave kažejo na velike neenakosti v kakovosti obporodne oskrbe v evropski regiji Svetovne zdravstvene organizacije.

Razprava in zaključki: Na posameznih področjih dosega Slovenija dobre rezultate, kaže pa se tudi, da na nekaterih področjih obporodne oskrbe v porodnišnicah obstajajo pomanjkljivosti in možnosti za izboljšanje kakovosti. Te vrzeli je potrebno prepoznavati, obravnavati ter jih upoštevati; potrebne so ustrezne strategije za izboljšanje obporodnega zdravstvenega varstva žensk in novorojenčkov. Z vidika zdravja in dobrobiti celotne populacije je naslavljanje kakovosti obporodne oskrbe pomembno, saj lahko izkušnja poroda in rojstva bistveno zaznamuje posameznikovo življenje že na samem začetku (družinskega) življenja.

Ključne besede: obporodna oskrba, porodnica, porodna izkušnja

Perinatal health care: women's experiences in Slovenia and selected European countries

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Introduction: Women's experiences of maternity care are of paramount importance, as they can empower them or cause harm, negative experiences or even trauma, therefore efforts to provide quality, respectful and evidence-based perinatal care are essential. The international IMAGiNE EURO survey focuses on the quality of maternal and newborn care in maternity hospitals. We present and compare the results from selected European countries of the cross-sectional IMAGiNE EURO study, which explores women's experiences of perinatal care in maternity hospitals.

Methods: Data were collected using a structured online questionnaire based on 40 quality measures based on the World Health Organization's document - *Standards for Improving the Quality of Maternal and Newborn Care in Health Facilities*, 2016. The questionnaire includes 4 categories: provision of care, experience of care, availability of human and other resources; an additional domain includes key organisational changes during the covid-19 pandemic. Each category covers 10 quality indicators that make up an overall index of quality of perinatal care for mothers and newborns - Quality of Maternal and Newborn Care Index (QMNC), which has a maximum value of 400 points. We present reports from women in 12 European countries who gave birth between 1 March 2020 and 15 March 2021, with a focus on the experiences of Slovenian women. The Slovenian sample includes 2.092 women and the total sample 21.027 women.

Results: According to the Quality of Maternal and Newborn Care Index, Slovenia ranks in the middle of the 12 participating countries with 320 points. The highest QMNC Index is achieved by Luxembourg - 355, and the lowest by Serbia - 205. In some aspects of perinatal care, we achieve good results, but in some aspects, improvements are needed, especially in relation to mothers' autonomy, respect, emotional and practical support. More than half (51.6%) of Slovenian women report that they could not move freely during childbirth, in Norway, only 7.9% of women reported this. 61.6% of Slovenian women report that they did not have a free choice of birth position during vaginal birth, this is reported by 32.4% of women in Italy. 29.8% of women who gave birth in Slovenia report that they did not receive emotional support; 30.6% of them report that they were not involved in decisions concerning themselves. Overall, the survey results indicate large inequalities in the quality of perinatal care in the European Region of the World Health Organization.

Discussion and conclusion: Slovenia perform well in some areas, however there are deficiencies and room for improvement in other areas of perinatal care in maternity hospitals. These gaps need to be recognised, monitored and addressed as well as appropriate strategies need to be implemented to improve perinatal care for women and newborns. Addressing the quality of perinatal health care is important from the perspective of the health and well-being of the population as a whole, as the experience of childbirth can have a significant impact on an individual's life from the very beginning of (family) life.

Keywords: maternity care, woman giving birth, birth experience

Pljučna rehabilitacija v bolnišnici Sežana

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Izhodišča in namen: Jamsko okolje predstavlja ekstremno okolje, na katerega se človek prilagodi v odvisnosti od številnih fizikalnih, kemijskih in antropoloških dejavnikov. Jamska mikroklima je, kot posebna in unikatna enota jamskega ekosistema, sistem, zgrajen iz več posameznih parametrov z lastno biološko aktivnostjo. Vpliv jamskega okolja na človeka pa je odvisen od skupnega delovanje različnih dejavnikov. V svetu se jame najpogosteje uporabljajo v turistične namene. Vendar se jamsko okolje uporablja tudi v zdravstvene namene, kar imenujemo speleoterapija. Speleoterapija je posebna oblika klimatoterapije, pri kateri se s pomočjo jamske mikroklime zdravi kronične pljučne bolezni. Po podrobnih in ciljnih klimatoloških raziskavah se je v petdesetih letih prejšnjega stoletja začelo dolgoročno spremljanje učinkovitosti speleoterapije v Evropi. V tem času so bili nosilci temeljnih raziskav geografi in geologi, zdravstveni podatki so le potrjevali izjemno dobre klinične rezultate. Številni viri potrjujejo, da se po terapiji v jamskem okolju izboljšajo pljučne funkcije, zmanjša se poraba zdravil, izboljša se splošna fizična in psihična kondicija, okrepi se imunski sistem. Pozitiven učinek speleoterapije na pljučne bolnike je mogoče zaznati tudi po zaključenem ciklusu terapij, kar se kaže v redkejših poslabšanih boleznih.

Predstavitev vsebine: V Sežanski bolnišnici se pljučna rehabilitacija izvaja od leta 1991 in temelji na interdisciplinarnem delovanju tima zdravnika pulmologa, medicinske sestree, fizioterapevte in dietetičarke. Z izvajanjem pljučne rehabilitacije v jami pride do izboljšanja stanja osnovne respiratorne bolezni, izboljšata se fizična zmogljivost posameznika ter kakovost življenja. Predstavljena bo izvedba programa pljučne rehabilitacije v bolnišnici Sežana, z nekaterimi primerjavami zdravljenja astmatikov in bolnikov s kroničnim obstruktivnim bronhitisom v drugih centrih po Evropi. Podani bodo rezultati meritev pljučnih funkcij, šest minutnega testa hoje in ocena dispneje pred in po programu rehabilitacije.

Sklepne ugotovitve: Izboljšanje kakovosti življenja odraslih pljučnih bolnikov je nedvomno pomembna komponenta trajnostnega razvoja družbe. Glede na koristi tovrstne pljučne rehabilitacije bi v prihodnosti bilo smiselno omogočiti tovrstno rehabilitacijo tudi mlajšim odraslim, ki so še delovno aktivni.

Ključne besede: speleoterapija, jamska mikroklima, test hoje

Pulmonary rehabilitation in Sežana hospital

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Background and purpose: The cave environment is an extreme environment to which humans adapt depending on a number of physical, chemical and anthropological factors. The cave microclimate, as a specific and unique unit of the cave ecosystem, is a system consisting of several individual parameters with their own biological activity. The impact of the cave environment on humans depends on the combined effect of various factors. Caves are the most popular tourist attraction in the world. However, the cave environment is also used for health purposes, known as speleotherapy. Speleotherapy is a special form of climatotherapy in which the cave microclimate is used to treat chronic lung diseases. Following detailed and targeted climatological studies, long-term monitoring of the effectiveness of speleotherapy began in Europe in the 1950s. At that time, it was mainly geographers and geologists who were at work, and medical data only confirmed the extremely good clinical results. Numerous sources confirm that after therapy in the cave environment, lung functions improve, the consumption of medication decreases, the general physical and mental condition improves and the immune system is strengthened. The positive effect of speleotherapy on lung patients can also be seen after a completed therapy cycle, which is reflected in fewer exacerbations of the disease.

Content presentation: Pulmonary rehabilitation has been carried out at Sežana Hospital since 1991 and is based on the interdisciplinary work of a team consisting of a lung specialist, nurse, physiotherapist and dietician. By carrying out pulmonary rehabilitation in the cave, the condition of the underlying respiratory disease improves, the physical performance of the individual and the quality of life are improved. The implementation of the pulmonary rehabilitation programme at Sežana Hospital is presented and some comparisons are made with the treatment of asthmatics and patients with chronic obstructive bronchitis in other centres in Europe. The results of pulmonary function measurements, a six-minute walk test and an assessment of dyspnoea before and after the rehabilitation programme are presented.

Conclusions: Improving the quality of life of adult lung patients is undoubtedly an important part of the sustainable development of society. Given the benefits of this type of pulmonary rehabilitation, it would be useful to make such rehabilitation available in the future to younger adults who are still in active working life.

Keywords: speleotherapy, cave microclimate, walking test

Kakovost delovnega okolja v povezavi z duševnim zdravjem zaposlenih v zdravstveni negi

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Uvod: Zdravstvena nega spada med poklice izpostavljene večjim obremenitvam in stresu na delovnem mestu. Posledice na duševnem zdravju postajajo vedno bolj izpostavljeno dejstvo, posebej zaposlenih v zdravstveni negi. Namen raziskave je bil preučiti kakovost delovnega okolja in duševno zdravje med zaposlenimi v zdravstveni negi.

Metode: Raziskava je temeljila na kvantitativni metodologiji. Kot raziskovalni instrument je bil uporabljen preveden vprašalnik za oceno kakovosti delovnega okolja in duševnega zdravja. Raziskava je potekala med zaposlenimi v zdravstveni negi v slovenskih bolnišnicah. Podatki so se analizirali s pomočjo programa IBM SPSS Statistics 28.0.

Rezultati: Več kot polovica udeležencev je poročala, da redno ali pogosto doživljajo stres, četrtnina pa jih je poročala, da ga doživljajo zelo pogosto. Po drugi strani pa je bila kakovost delovnega življenja v povprečju ocenjena zelo pozitivno, dobro pa je bilo tudi duševno zdravje zaposlenih v zdravstveni negi. Obstajajo razlike v kakovosti delovnega življenja in duševnem zdravju glede na spol, različne ravni podpore vodij in obvladovanje stresa. Raziskava je pokazala, da podpora vodij, kakovost delovnega življenja in obvladovanje stresa vplivajo na duševno zdravje zaposlenih v zdravstveni negi.

Razprava in zaključki: Delovne obremenitve lahko vodijo do večje stopnje neakovostnega delovnega okolja in povečanega tveganja v povezavi z duševnim zdravjem. Zaposlene v zdravstveni negi je potrebno ozaveščati o pomenu duševnega zdravju zaradi psihično in fizično pomembnih učinkov na zdravje posameznika.

Ključne besede management; delovno mesto; dobro počutje

The quality of the work environment in relation to the mental health of nursing employees

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Introduction: Nursing is one of the professions exposed to higher workloads and stress in the workplace. Mental health is becoming an increasingly exposed fact, especially for those working in nursing during the epidemic. The purpose of the research was to study the quality of the working environment and examine mental health among nursing staff.

Methods: The research was based on quantitative methodology. A translated questionnaire was used as a research instrument to assess the quality of the work environment and mental health. The research was conducted among nursing employees in Slovenian hospitals. Data were analyzed using IBM SPSS Statistics 28.0.

Results: More than half of participants reported experiencing stress regularly or frequently, and a quarter reported experiencing it very frequently, participants. On the other hand, on average, the quality of work life was assessed highly positively, and also the mental health of employees in nursing was good. There were differences in quality of work life and mental health according to gender, different levels of leaders' support, and managing stress. The research showed that leaders' support, quality of work life and managing stress affect employees' mental health in nursing.

Discussion and conclusion: Work stress can lead to higher levels of poor quality of work life and increased risk in relation to mental health. Zaposlene v zdravstveni negi je potrebno ozaveščati o pomenu duševnega zdravju zaradi psihično in fizično pomembnih učinkov na zdravje posameznika.

Keywords: management; workplace; well-being

Informiranje, podpora, pomoč pri dojenju v slovenskih porodnišnicah: izkušnje in predlogi mater

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Uvod: Laktacija in dojenje sta izjemnega pomena za zdravje otrok in žensk, pri slednjih je potrjeno, da znižuje tveganja za raka na prsih in jajčnikih in za povišan krvni tlak. SZO in UNICEF priporočata, naj mati novorojenčka pristavi k dojkam v prvi uri po porodu. V času, ko so matere z novorojenčki na poporodnih oddelkih, naj bi dobile vso potrebno podporo in pomoč, da bi dojenje kar se da gladko (s)teklo. Zdravstveni strokovnjaki naj bi materam pokazali, kako dojiti, jih spodbujali, da otroka podojijo vedno, kadar to potrebuje, otroku pa dajali tekočino ali mlečne pripravke le, če za to obstajajo zdravstveni razlogi. V mednarodni presečni raziskavi IMAgiNE EURO se posvečamo kakovosti oskrbe mater in novorojenčkov v porodnišnicah z vidika žensk, ena od pomembnih tematik je tudi podpora dojenju.

Metode: Podatke zbiramo s pomočjo strukturiranega spletnega vprašalnika, ki temelji na 40 kazalnikih kakovosti na podlagi opredelitve SZO. Obravnavamo samoporočanja žensk iz 12 evropskih držav, ki so rodile od 1.3.2020 do 14.3.2022. Slovenski vzorec zajema 2.354 žensk. Kodirali in analizirali smo proste odgovore na odprto vprašanje v vprašalniku za matere glede predlogov za izboljšanja kakovosti oskrbe v porodnišnici, kjer je rodila, ki so povezani z dojenjem.

Rezultati: Od 479 prostih odgovorov žensk, ki so rodile v slovenskih porodnišnicah, se jih približno 15 % nanaša na dojenje; razporejeni so v osem kategorij: skladnost nasvetov, znanje zdravstvenih strokovnjakov, odnos, prehrana mater, prehrana nedojenih otrok, informirana izbira, oprema in pripomočki. Matere poročajo, da so dobile premalo pomoči, nasvetov in podpore; izpostavljajo neskladnost in neenotnost pristopov in nasvetov ter zastarelost, zaostalost in nesodobnost znanja o dojenju zdravstvenih strokovnjakov, neustrezen odnos, neustrezno in količinsko preskromno prehrano doječih mater, neprimerne pristope do prehrane dojenčkov, ki niso dojeni, neuresničevanje informirane izbire glede dojenja ali hranjenja otroka z adaptiranim mlekom, pomanjkanje ustrezne opreme in pripomočkov; in predlagajo izboljšave na vseh naštetih področjih.

Razprava in zaključki: Večina nosečnic si želi, da bi otroka hranila z lastnim mlekom. Za dobre prakse dojenja matere potrebujejo kakovostne informacije že v nosečnosti, po porodu pa tudi praktično podporo in pomoč ter ustrezne pogoje, kar poudarjajo matere, vključene v raziskavo. Bivanja v porodnišnici razumemo kot izjemno priložnost za informiranje, razreševanje dvomov in težav ter konkretno individualizirano pomoč pri razvoju veščin, potrebnih za dobro dojenje. Znanje o različnih vidikih laktacije in dojenja vseh zdravstvenih strokovnjakov mora biti sodobno, večji naj bodo podpore in svetovanja, okoliščine njihovega delovanja pa naj omogočajo poglobljeno in sočutno sodelovanje z materami pri njihovih prizadevanjih, da bi dojile svoje otroke. To bo prispevalo k pozitivnim učinkom na zdravje in kakovost življenja otrok, mater in družin.

Gljučne besede: dojenje, porodnišnica, mati, izkušnja, podpora

Information and Help with Breastfeeding in Maternity Hospitals: Mothers' Experiences and Suggestions

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Introduction: Lactation and breastfeeding are of paramount importance for children's and women's health; it has been shown to reduce the risk of breast and ovarian cancer and high blood pressure of women. The WHO and UNICEF recommend that a mother should latch her newborn to the breast within the first hour after birth. While mothers with newborn babies are in the postnatal wards, they should be given all the support and help they need to make breastfeeding as smooth as possible. Health professionals should show mothers how to breastfeed, encourage them to breastfeed whenever the baby needs, and only give the baby formula if there are medical reasons. The IMAGiNE EURO international cross-sectional survey focuses on the quality of maternal and newborn care in maternity hospitals from the perspective of women, and breastfeeding support is one of the important themes.

Methods: Data are collected using a structured online questionnaire based on WHO's 40 quality indicators. We consider self-reports of women from 12 EU countries who gave birth between 1 March 2020 and 14 March 2022. The Slovenian sample includes 2.354 women. We coded and analyzed responses to an open-ended question in a questionnaire for mothers regarding breastfeeding-related suggestions for improving the quality of care in the maternity hospital where she gave birth.

Results: Of the 479 open-ended responses from women who gave birth in Slovenian maternity hospitals, around 15% related to breastfeeding; they are grouped into eight categories: consistency of advice, knowledge of health professionals, attitudes, maternal nutrition, nutrition of non-breastfed babies, informed choice, equipment. Mothers report that they received too little help, advice and support; highlight inconsistency of approaches and advice, and outdated, backward and inconsistent knowledge of breastfeeding by health professionals, inadequate attitudes, inadequate nutrition of breastfeeding mothers, inappropriate approaches to the nutrition of non-breastfed infants, lack of informed choices about breastfeeding, lack of appropriate equipment and utensils; and suggest improvements in all of the above areas.

Discussion and conclusion: Mothers need good quality information in pregnancy and practical support and help after birth, as well as the right conditions, as highlighted by the mothers in the study. Their staying on maternity ward offers exceptional opportunity to provide information, to resolve doubts and problems, and to provide concrete individualised help to develop the skills needed for good breastfeeding. The knowledge of all health professionals on the various aspects breastfeeding should be up-to-date, they should be skilled in support and counselling, and the circumstances in which they work should allow them to work in depth and compassionately with mothers in their efforts to breastfeed their babies. This will contribute to positive effects on the health and quality of life of children, mothers and families.

Keywords: breastfeeding, maternity hospital, mother, experience, support

Stališča družinskih članov do prisotnosti med oživljanjem svojih bližnjih: integrativni pregled literature

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Uvod: Prisotnost družinskih članov med reanimacijo pomeni, da imajo družinski člani možnost biti prisotni in opazovati postopek oživljanja njihovega bližnjega, ki ga izvajajo zdravstveni delavci sicer pa ta praksa v kliničnih okoljih še vedno ni dobro sprejeta in ostaja predmet razprave. Namen pregleda literature je bil ugotoviti stališča družinskih članov do njihove prisotnosti med kardiopulmonarnim oživljanjem svojih bližnjih in kateri dejavniki vplivajo na ta stališča.

Metode: Izveden je bil sistematični pregled znanstvene literature. Za iskanje literature smo uporabili mednarodne podatkovne baze PubMed, Wiley ter ScienceDirect. Uporabili smo naslednjo iskalno strategijo: „relatives“ OR „family members“ AND „family presence during resuscitation“ OR „family witnessed resuscitation“. Merila za vključitev so bila razpoložljivost celotnega besedila, izvirni znanstveni članek v angleščini in objava med 1. Januarjem 2014 in 1. Januarjem 2024. Za oceno kakovosti posameznih raziskav smo uporabili orodje Critical Appraisal Skills Programme. Iskanje literature je potekalo od 1. februarja do 20. marca 2023. Potek iskanja literature je prikazan z diagramom PRISMA. Narejena je vsebinska analiza pridobljenih rezultatov.

Rezultati: Izmed 237 identificiranih zadetkov je bilo v končno analizo vključenih 10 članov. Na podlagi integrativnega pregleda literature smo ugotovili, da si družinski člani večinoma želijo biti prisotni pri oživljanju njihovih sorodnikov. Na to stališče vpliva več dejavnikov od katerih je najbolj izstopajoč predvsem pretekla izkušnja z prisotnostjo pri reanimaciji svojih bližnjih. Ostali dejavniki, ki vplivajo na stališča so: čustvena povezanost in podpora, fizična bližina, lažje soočanje z žalovanjem in preglednost možnosti zdravljenja.

Razprava in zaključki: Prisotnost družinskih članov med kardiopulmonarnim oživljanjem je pogosto zelena praksa s strani svojcev, pri čemer različni dejavniki pomembno vplivajo na njihovo stališče. Te ugotovitve poudarjajo potrebo po upoštevanju preferenc družinskih članov pri oblikovanju praks kardiopulmonarnega oživljanja, kar lahko izboljša izkušnjo pacientov in njihovih bližnjih ter prispeva k bolj celostnem pristopu v kliničnih okoljih. V prihodnosti bi bilo smiselno razširiti raziskavo na širšo splošno populacijo.

Ključne besede: družinski člani, kardiopulmonarno oživljanje, prisotnost pri reanimaciji

Family members attitudes towards being present during resuscitation of their relatives: an integrative literature review

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Introduction: Family presence during resuscitation means that family members have the opportunity to be present and observe the resuscitation of their loved one by health-care professionals, but this practice is still not well accepted in clinical settings and remains a matter of debate. The aim of the literature review was to determine the attitudes of family members towards their presence during the cardiopulmonary resuscitation of their loved ones and which factors influence these attitudes.

Methods: A systematic review of the scientific literature was performed. The international databases PubMed, Wiley and ScienceDirect were used. We used the following search strategy: 'relatives' OR 'family members' AND 'family present during resuscitation' OR 'family witnessed resuscitation'. Inclusion criteria were the availability of full-text, original scientific articles in English and publication between 1 January 2014 and 1 January 2024. We used the Critical Appraisal Skills Programme tool to assess the quality of each study. The literature search was conducted from 1 February to 20 March 2023. The flow of the literature search is shown in the PRISMA flowchart. A content analysis of the results was performed.

Results: Out of 237 identified hits, 10 articles were included in the final analysis. Based on an integrative literature review, we found that family members mostly want to be present when their relatives are resuscitated. This view is influenced by several factors, the most prominent of which is past experience of being present during the resuscitation of their relatives. Other factors influencing attitudes are: emotional connection and support, physical proximity, ease of coping with grief and transparency of treatment options.

Discussion and conclusions: The presence of family members during cardiopulmonary resuscitation is often a preferred practice by relatives, with various factors having a significant influence on their attitudes. These findings highlight the need to consider family members' preferences when designing cardiopulmonary resuscitation practices, which may improve the experience of patients and their relatives and contribute to a more holistic approach in clinical settings. In the future, it would be worthwhile to extend the study to a wider general population.

Keywords: family members, cardiopulmonary resuscitation, presence during resuscitation

Izkušnje z rehabilitacijo po prebolelem raku: kvalitativna analiza osebnih zgodb bolnikov

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Uvod: Rak predstavlja nenormalno in nenadzorovano rast celic v telesu. Obstaja več vrst raka, vsi pa lahko povzročijo številne telesne, kognitivne in psihološke težave, ki zmanjšujejo funkcionalno sposobnost in kakovost življenja. V tem kontekstu rehabilitacija pomaga osebam, da postanejo čim bolj samostojne pri vsakodnevnih dejavnostih in jim omogoča sodelovanje v izobraževanju, delu, rekreaciji ter pomembnih življenjskih vlogah. Namen raziskave je bil preučiti izkušnje bolnikov po prebolelem raku z vidika vračanja v vsakdanje življenje.

Metode: Raziskava je temeljila na kvalitativni deskriptivni metodi. Podatki so bili zbrani prek individualnih, delno strukturiranih intervjujev. Namenski vzorec je vključeval 6 žensk, starih med 48 in 69 let, ki so prebolele raka dojke in zaključile z rehabilitacijo. Vzorec smo pridobili na podlagi osebnih poznanstev in preko združenja Evropa Donna. Intervjuji so potekali preko spletne platforme Zoom in v živo, z vnaprej pripravljenim vodičem za intervju. Podatki so bili analizirani z metodo analize vsebine.

Rezultati: Identificirane so bile štiri tematske skupine, ki opisujejo izkušnje z rehabilitacijo po prebolelem raku: (1) osebna izkušnja s celostno rehabilitacijo po prebolelem raku, (2) odkritje in zdravljenje raka, (3) vračanje v socialno okolje po končanem zdravljenju, (4) delovno okolje in vpliv bolezni na poklicno življenje in kariero. Rezultati so pokazali različna mnenja in izkušnje z rehabilitacijo ter vračanjem v vsakdanje življenje. Bolezen je močno vplivala na njihovo psihofizično počutje in kakovost življenja. Pomembno vlogo pri zdravljenju in rehabilitaciji so imeli družina, prijatelji in sodelavci. Vračanje v socialno in delovno okolje jim ni predstavljalo ovir, posebej dobro so bile sprejete v delovnem okolju s strani sodelavcev. Nekatere intervjuvanke so imele prilagojen delovni čas.

Razprava in zaključki: Raziskava, ki je obravnavala izkušnje posameznic z rakom, kaže ugotovitve glede poteka bolezni, zdravljenja in rehabilitacije. Rezultati kažejo različne reakcije na diagnozo bolezni, ki so vključevale šok in občutek, da je to najhujše, kar se jim je kdaj zgodilo. Raziskava je razkrila poudarek na fizični aktivnosti, saj so intervjuvanke menile, da jim je to močno pomagalo pri spopadanju z boleznijo, največkrat sta izpostavljena gibanje v naravi in joga. Rak je težka bolezen, ki lahko močno vpliva na kakovost življenja, vendar empatija, sočutje in dobri odnosi v okolici lahko pomembno prispevajo k lažjemu poteku zdravljenja in rehabilitacije.

Ključne besede: psihofizično dobro počutje, vrnitev v socialno okolje, zdravljenje, kakovost življenja

Experiences of cancer rehabilitation: a qualitative analysis of patients' personal stories

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Introduction: Cancer is the abnormal and uncontrolled growth of cells in the body. There are several types of cancer, all of which can cause a number of physical, cognitive and psychological problems that reduce functional ability and quality of life. In this context, rehabilitation helps people to become as independent as possible in everyday activities and enables them to participate in education, work, recreation and important life roles. The purpose of the research was to examine the experiences of patients after cancer from the point of view of returning to everyday life.

Methods: The research was based on a qualitative descriptive method. Data were collected through individual, semi-structured interviews. The purposive sample included 6 women between the ages of 48 and 69 who had survived breast cancer and completed rehabilitation. We obtained the sample on the basis of personal acquaintances and through the association Evropa Donna. The interviews were conducted via the Zoom online platform and live, with a pre-prepared interview guide. Data were analyzed using the content analysis method.

Results: Four thematic groups were identified that describe experiences with rehabilitation after cancer: (1) personal experience with comprehensive rehabilitation after cancer, (2) cancer detection and treatment, (3) returning to the social environment after treatment, (4) the working environment and the impact of the disease on professional life and career. The results showed different opinions and experiences with rehabilitation and returning to everyday life. The disease had a strong impact on their psychophysical well-being and quality of life. Family, friends and colleagues played an important role in treatment and rehabilitation. Returning to the social and working environment did not pose any obstacles for them, they were particularly well received in the working environment by their colleagues. Some interviewees had adjusted working hours.

Discussion and conclusions: The study, which looked at the experiences of women with cancer, shows findings on the course of the disease, treatment and rehabilitation. The results show a range of reactions to the diagnosis of the disease, including shock and a feeling that this was the worst thing that had ever happened to them. The survey revealed an emphasis on physical activity, as interviewees felt that this had helped them a lot in coping with their illness, with exercise in nature and yoga being the most frequently highlighted. Cancer is a difficult disease that can have a profound impact on quality of life, but empathy, compassion and good relationships in the surrounding environment can make a significant contribution to facilitating treatment and rehabilitation.

Keywords: psychophysical well-being, return to the social environment, treatment, quality of life

Kakovost delovnega življenja medicinskih sester zaposlenih na področju onkološke zdravstvene nege

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Uvod: Medicinske sestre v onkološki zdravstveni negi igrajo ključno vlogo pri zagotavljanju celostne oskrbe pacientov, vendar se pogosto soočajo z visoko stopnjo stresa in čustveno izčrpanostjo, kar vpliva na njihovo delovno zadovoljstvo in kakovost življenja.

Metode: V raziskavi je bila uporabljena kvantitativna, deskriptivna in neeksperimentalna metoda. Podatki so bili zbrani s spletno anketo, zasnovano na vprašalniku »Quality of Nursing Work Life Scale« (QNWLS), prilagojenem slovenskemu okolju. Vprašalnik vsebuje 35 trditev, ocenjenih s petstopenjsko Likertovo lestvico. Skupna ocena varira od 35 do 175 točk, višje točke pa pomenijo boljšo kakovost delovnega življenja. V raziskavi je sodelovalo 52 diplomiranih medicinskih sester v onkološki negi, s povprečno starostjo 38,56 let. Anketiranje je potekalo novembra in decembra 2023 prek orodja EnKlikAnketa. Podatki so bili analizirani z deskriptivnimi in inferenčnimi statističnimi metodami, vključno z linearno regresijo, Wilcoxonovim testom in Kruskal-Wallisovim testom, z mejo statistične značilnosti $p < 0,05$.

Rezultati: Zanesljivost QNWLS vprašalnika smo preverili s koeficientom Cronbach alfa, ki je znašal 0,914, kar potrjuje odlično veljavnost vprašalnika. Dve trditvi, ki sta bili najvišje ocenjeni, sta: »Protokoli in standardi zdravstvene nege olajšajo moje vsakodnevno delo« s povprečno oceno 4,04 in »Moja dnevna opravila so pogosto prekinjena/moten« s povprečno oceno 4,14. Po drugi strani sta trditvi, ki sta prejeli najnižjo povprečno oceno: »Za svoje delo sem ustrezno plačan/a« in »Število medicinskih sester v mojem timu je primerno« s povprečnima ocenama 2,95 in 3,09. Rezultati tudi kažejo na relativno visoko kakovost delovnega življenja medicinskih sester zaposlenih na področju onkološke zdravstvene nege ($M = 121,65$; $s = 16,04$; 95 % interval zaupanja [117,39; 125,90]) saj so rezultati pokazali na statistično pomembno razliko med mediano anketirancev ($Me = 121$) in predpostavljeno vrednostjo mediane, ki je 105 ($p < 0,001$). Rezultati so še pokazali, da med medicinskimi sestrami, ki delajo različno izmensko delo, ni statistično značilnih razlik v ocenjevanju kakovosti delovnega življenja ($\chi^2 = 0,177$; $s.p. = 2$; $p = 0,915$). Model linearne regresijske analize je pokazal, da starost ni statistično pomemben prediktor kakovosti delovnega življenja anketirank ($p = 0,217$). Tudi koeficient determinacije je nizek ($R^2 = 0,228$), kar pomeni, da model pojasni samo 2,8% variabilnosti v ocenah kakovosti delovnega življenja, kar je zelo majhen delež.

Razprava in zaključek: Na podlagi rezultatov smo ugotovili, da so medicinske sestre zadovoljne z opravljanjem svojega dela na področju onkologije, da jim njihove organizacije nudijo možnosti ustreznih izobraževanj in zadostno količino materiala za izvajanje standardizirane zdravstvene nege. Ne glede na vse, pa menijo, da za svoje delo niso ustrezno plačane ter, da je število medicinskih sester v njihovih zdravstvenih timih neustrezno oziroma nezadostno. Vsaka ustanova, ki si želi kakovostnega nujenja zdravstvene nege bi morala ugotoviti kakovost delovnega življenja medicinskih sester, saj lahko na podlagi tega uvede številne spremembe, ki bodo vplivale na boljše življenje medicinskih sester in posledično na njihovo izvajanje zdravstvene nege. Skladno s tem predlagamo nadaljnje raziskave s pomočjo ustreznih vprašalnikov z večjim številom anketirancev.

Ključne besede: zadovoljstvo z delom, onkološka zdravstvena nega, kakovost oskrbe, medicinske sestre

Quality of Work Life of Oncology Nurses

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Introduction: Oncology nurses play a crucial role in the comprehensive care of patients, but are often confronted with high levels of stress and emotional exhaustion, which affect their job satisfaction and quality of life.

Methods: A quantitative, descriptive and non-experimental method was used in the study. The data was collected by means of an online survey based on the “Quality of Nursing Work Life Scale” (QNWLS), which was adapted to the Slovenian context. The questionnaire consists of 35 statements, which are rated on a five-point Likert scale (1–5). The total score ranges from 35 to 175 points, with higher scores indicating a better quality of working life. The study involved 52 registered nurses working in oncology, with an average age of 38.56 years. The survey was conducted in November and December 2023 using the EnKlikAnketa tool. The data were analysed using descriptive and inferential statistical methods, including linear regression, Wilcoxon signed-rank test and Kruskal-Wallis test, with a significance level of $p < 0.05$.

Results: The reliability of the QNWLS questionnaire was verified with a Cronbach’s alpha coefficient of 0.914, confirming excellent questionnaire validity. The two statements receiving the highest ratings were: “Protocols and standards of nursing facilitate my daily work” with an average rating of 4.04 and “My daily tasks are often interrupted/disturbed” with an average rating of 4.14. On the other hand, the two statements receiving the lowest average ratings were: “I am adequately paid for my work” and “The number of nurses in my team is adequate” with average ratings of 2.95 and 3.09, respectively. The results also indicate a relatively high quality of work life for nurses employed in oncology nursing ($M = 121.65$; $SD = 16.04$; 95% confidence interval [117.39; 125.90]), as there was a statistically significant difference between the respondents’ median ($Mdn = 121$) and the assumed median value of 105 ($p < 0.001$). Furthermore, the results showed no statistically significant differences in the assessment of quality of work life among nurses working different shifts ($\chi^2 = 0.177$; $df = 2$; $p = 0.915$). Additionally, the linear regression analysis model indicated that age was not a statistically significant predictor of the quality of work life for respondents ($p = 0.217$). The coefficient of determination was also low ($R^2 = 0.228$), indicating that the model explains only 2.8% of the variability in the ratings of quality of work life, which is a very small proportion.

Discussion and Conclusion: Based on the results, it was found that nurses are satisfied with their work in oncology, and their organizations provide them with opportunities for adequate education and sufficient material resources for standardized nursing care. However, they feel inadequately compensated for their work and believe that the number of nurses in their healthcare teams is insufficient. Any institution aiming for quality healthcare provision should assess the quality of work life of nurses, as this can lead to implementing numerous changes that will improve the lives of nurses and consequently their delivery of healthcare. Accordingly, further research is recommended using appropriate questionnaires with a larger number of respondents.

Keywords: job satisfaction, oncology nursing, quality of care, nurses

Obremenitve zaposlenih v zdravstveni negi zaradi izmenskega dela po 50. letu starosti

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Uvod: Zaposleni v zdravstveni negi zagotavljajo oskrbo pacientom neprekinjeno 24 ur na dan. Izmensko delo poruši dnevni ritem telesa, vpliva na večino telesnih funkcij in tudi na družbeno življenje zaposlenih. Zakonodaja s področja izmenskega dela zaposlenim v zdravstveni negi omogoča, da po 50. letu prenehajo z delom v nočni izmeni. Namen priprave prispevka je ugotoviti razloge, ki prispevajo k odločitvi zaposlenih v zdravstveni negi, ali bodo po 50. letu starosti še vedno opravljali delo v nočni izmeni ali ne. Poleg tega želimo opredeliti vpliv večizmenskega dela na telesno in duševno zdravje ter na kakovost življenja zaposlenih v zdravstveni negi.

Metode: Raziskava temelji na metodi empiričnega kvalitativnega raziskovanja. Polstrukturirani intervjuji so bili opravljeni z desetimi medicinskimi sestrami zaposlenimi na sekundarnem ravni zdravstvenega varstva. Le-te so predhodno podale ustno soglasje za sodelovanje v raziskavi. Intervjuje smo posneli, naredili prepise in jih kvalitativno vsebinsko analizirali. Pri pripravi teoretičnega dela smo se oprli na izbrano domačo in tujo literaturo.

Rezultati: Večina zaposlenih v zdravstveni negi je seznanjena z dejstvom, da imajo na podlagi zakonodaje se možnost odločiti, ali bodo po 50. letu starosti še opravljali delo v nočni izmeni. Najpogostejši razlogi za prenehanje z delom v nočni izmeni so povečan obseg dela v nočni izmeni, organizacija dela ter vpliv na njihovo zdravje. Nepravilno načrtovane izmene, nočno delo in pomanjkanje spanja prispevajo k povečanemu tveganju za izgorelost, stres, nesreče pri delu in k zdravstvenim težavam zaposlenih.

Razprava in zaključki: Petino vseh zaposlenih v zdravstveni negi v ustanovi, kjer je potekala raziskava, predstavljajo medicinske sestre starejše od 50 let. Med njimi jih 20 % ni podalo soglasja za delo v nočni izmeni. Izmensko delo zaposleni v zdravstveni negi prepoznajo kot resen dejavnik tveganja za zdravje. Vpliva lahko na zdravje zaposlenih, delovno učinkovitost in varnost pri delu ter na družinsko in socialno življenje zaposlenih. Izmensko delo predstavlja pomembno obremenitev izvajalcem zdravstvene nege. Skozi raziskavo ugotavljamo povezavo med starostjo in slabšim telesnim ter duševnim zdravjem. Mlajši izvajalci zdravstvene nege bolje prenašajo izmensko delo kot starejši.

Gljučne besede: izmensko delo, obremenitev zaposlenih v zdravstveni negi, kolektivna pogodba za zaposlene v zdravstveni negi, kakovost življenja

Burden of nursing employees due to shift work after the age of 50

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Introduction: Nursing employees provide care to patients continuously 24 hours a day. Shift work disrupts the daily rhythm of the body, affects most bodily functions and also the social life of employees. Legislation in the field of shift work allows nursing employees to stop working the night shift after the age of 50. The purpose of the paper is to determine the reasons that contribute to the decision of nursing employees whether they will continue to work in the night shift after the age of 50 or not. In addition, we want to define the impact of multi-shift work on the physical and mental health and quality of life of nursing employees.

Methods: The research is based on the method of empirical qualitative research. Semi-structured interviews were conducted with ten nurses employed at the secondary level of health care. They previously gave verbal consent to participate in the research. The interviews were recorded, transcribed and qualitatively analyzed. When preparing the theoretical work, we relied on selected domestic and foreign literature.

Results: The majority of nursing employees are aware of the fact that they have the opportunity to decide whether they will continue to work in the night shift after the age of 50. The most common reasons for stopping night shift work are the increased volume of night shift work, work organization and the impact on their health. Irregularly scheduled shifts, night work and lack of sleep contribute to an increased risk of burn-out, stress, accidents at work and health problems among employees.

Discussion and conclusions: One fifth of all nursing employees are nurses over 50 years of age. Among them, 20% did not give their consent to work in the night shift. Nursing employees recognize shift work as a serious health risk factor. It can affect the health of employees, work efficiency and safety at work, as well as the family and social life of employees. Shift work places a significant burden on nursing care providers. Through research, we establish a connection between age and poorer physical and mental health. Younger nurses tolerate shift work better than older ones.

Keywords: shift work, workload of nursing employees, Collective agreement for nursing employees, quality of life

Ustrahovanje in mobing v zdravstveni negi: opisno-interpretativna analiza

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Uvod: Problematika pomanjkanja zdravstvenega kadra je v Sloveniji že več let predmet razprav in zaradi staranja prebivalstva pa se še pogloblja. V zdravstvenih organizacijah primanjkuje medicinskih sester in ostalega zdravstveno negovalnega osebja. K izzivu prispeva tudi vloga nespodbudnega okolja, pogosto s prisotnim ustrahovanjem. Negativna dejanja ustrahovanja prinašajo širok spekter negativnih posledic za žrtev in njeno okolico. Tudi sodelavci, ki so priče ustrahovanja ali mobinga pogosto trpijo, ker žrtve ne morejo ali pa si je ne upajo ubraniti pred napadalcem. Težave, ki jih prinese fluktuacija zaposlenih organizaciji ne obsegajo zgolj finančnega bremena, temveč tudi slabšo kakovost izvedenega dela in s tem negativne izide za osebe, ki vstopajo v zdravstveni sistem. Namen raziskave je poglobljen vpogled v doživljanje ustrahovanja na delovnem mestu v zdravstveni negi, ter načine odzivanja medicinskih sester na negativna dejanja ustrahovanja.

Metode: Uporabljena je bila kvalitativna deskriptivna interpretativna metoda. Za pridobivanje podatkov je bil uporabljen delno strukturirani intervju z devetimi medicinskimi sestrami iz vseh ravni zdravstvenega varstva. Za obdelavo podatkov smo uporabili metodo tematske analize kvalitativnih podatkov.

Rezultati: Intervjuvanke so v poglobljenem intervjuju podrobno opisale osebne izkušnje doživljanja ustrahovanja in osvetlile njihov pogled na omenjeno problematiko. Z analizo podatkov je bilo identificiranih pet tematskih skupin (1) vzroki za pojavljanje ustrahovanja, (2) izkušnje z ustrahovanjem na delovnem mestu, (3) značilnosti povzročitelja in žrtve, (4) načini odzivanja in spoprijemanja z ustrahovanjem in (5) posledice ustrahovanja.

Razprava in zaključki: Za zaježitev ustrahovanja in s tem izboljšanjem pogojev v zdravstveni negi so potrebne spremembe na ravni organizacij, usmerjene v izrecno spoštovanje politike ničelne tolerance, edukacijo zaposlenih in vlaganje v krepitev medsebojnih odnosov v kolektivih.

Ključne besede: medicinske sestre, povzročitelj, žrtev, odnosi, mobing

Bullying and mobbing in nursing: A descriptive-interpretative analysis

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Introduction: The shortage of healthcare staff in Slovenia has been a topic of debate for many years, which is being intensified by the ageing of the population. Healthcare organisations are facing a shortage of nurses and other nursing staff. The challenge is further compounded by an unsupportive environment, often with bullying present. Negative acts of bullying have a wide range of negative consequences for the victim and those around them. Colleagues who witness bullying or mobbing may also suffer because they may be unable or unwilling to defend the victim against the attacker. Staff turnover brings not only financial problems to an organization but also a reduction in the quality of work and negative outcomes for those entering the health system. The aim of this research is to gain an in-depth insight into the experience of workplace bullying in nursing, and how nurses respond to negative acts of bullying.

Methods: Qualitative descriptive interpretive methods were employed to collect data from nine nurses across all levels of healthcare through semi-structured interviews. The data was then processed using thematic analysis of qualitative data.

Results: During the in-depth interview, the interviewees provided detailed accounts of their personal experiences with bullying and shared their perspectives on the issue. Five themes emerged from the data analysis: (1) causes of bullying, (2) experiences of bullying in the workplace, (3) characteristics of both perpetrators and victims, (4) strategies for responding to and coping with bullying, and (5) consequences of bullying.

Discussion and conclusions: To improve conditions in healthcare and reduce bullying, organisations need to make changes such as explicitly respecting zero-tolerance policies, educating staff, and investing in strengthening relationships within teams.

Keywords: nurses, perpetrator, victim, relationships, mobbing

Geriatrična rehabilitacija v bolnišnici Sežana

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Izhodišča in namen: S povečevanjem števila starejših oseb postaja skrb za njihovo zdravje in dobro počutje vse bolj pomembna. Pri tem ima geriatrična rehabilitacija ključno vlogo, saj se osredotoča na zdravljenje, podporo in izboljšanje funkcionalnih sposobnosti starejših ljudi. Namen prispevka je predstaviti vlogo in delo fizioterapije ter delovne terapije v okviru geriatricne rehabilitacije v bolnišnici Sežana.

Predstavitev vsebine: Fizioterapevtska obravnava, kot tudi pristop delovnih terapevtov v procesu geriatricne rehabilitacije temelji na individualnem pristopu. V bolnišnici Sežana se izvaja podaljšano bolnišnično zdravljenje po stanjih različnih patologij, kar vključuje tako ortopedske in travmatološke paciente, nevrološke paciente kot tudi internistične paciente. Z namenom prilagoditev rehabilitacijskega programa posamezniku fizioterapevti in delovni terapevti na prvem srečanju s pacientom izvedejo testiranje, ki je podlaga za skupno določitev ciljev. Glede na tip patologije se pripravi nabor testiranj, vključujoč MAS in RBI lestvico, goniometrijo, ročno dinamometrijo in šest minutni test hoje. Geriatrična rehabilitacija tako vključuje individualno obravnavo pacienta, in sicer učenje transferjev, personalizirano kinezioterapijo, učenje hoje s pripomočki, kot tudi skupinske vadbe in šolo hoje. Sočasno so pacienti rehabilitirani tudi s strani delovnih terapevtov, kar zajema ponovno individualne obravnave in skupinske vadbe, ki so v večji meri usmerjene v izboljšanje fine motorike rok in učenje samostojnosti. Delo fizioterapevtov in delovnih terapevtov se tako v okviru geriatricne rehabilitacije dopolnjuje in nadgrajuje. Sledljivost napredka pacientov se tedensko spremlja na sestankih z lečečim zdravnikom in socialno delavko. Pred odpustom pacienta fizioterapevti in delovni terapevti ponovijo meritve z namenom ocene stanja pacienta po zaključeni rehabilitaciji. Rezultati kažejo, da imajo generalno pacienti po zaključeni geriatricni rehabilitaciji izboljšanje v mobilnosti, sposobnosti hoje, razvoju fine motorike, kar se kaže v večji samostojnosti posameznika. Dodatno so v okviru rehabilitacije pacienti in njihovi svojci izobraženi o ergonomskih prilagoditvah in rešitvah, saj je le-to pomemben ukrep za preprečevanje padcev v domačem okolju.

Sklepne ugotovitve: Geriatrična rehabilitacija ni le pomembna za posameznike, temveč ima tudi širše družbene koristi. V želji, da bi spremljali smernice strategije razvoja zdravstva in aktivno oblikovali programe zdrave družbe v prihodnje, si prizadevamo nadgraditi program geriatricne rehabilitacije z dodatnimi dejavnostmi tako fizioterapije kot delovne terapije in preučiti možnost izvajanja določenih aktivnosti tudi na domu.

Ključne besede: kakovost življenja, geriatrična obravnava, fizioterapija, delovna terapija

Geriatric rehabilitation at Sežana Hospital

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Background and purpose: As the number of older people increases, it is becoming increasingly important to look after their health and well-being. Geriatric rehabilitation has a key role to play in this. It focuses on treating, supporting and improving the functional abilities of older people. The aim of this abstract is to present the role and work of physiotherapy and occupational therapy in geriatric rehabilitation at Sežana Hospital.

Content presentation: Physiotherapeutic treatment and treatment by occupational therapists in geriatric rehabilitation is based on an individualised approach. The Sežana Hospital treats a wide range of pathologies, including orthopaedic and traumatological patients, neurological patients and internal medicine patients. In order to tailor the rehabilitation programme to the individual, physiotherapists and occupational therapists carry out tests at the first meeting with the patient, on the basis of which they set treatment goals together with the patient. Depending on the type of pathology, they select a range of tests, including MAS and RBI scales, goniometry, manual dynamometry and a six-minute walk test.

The geriatric rehabilitation carried out by physiotherapists includes individualised treatment of the patient, including kinesiotherapy, walking school, etc. At the same time, patients are also rehabilitated by occupational therapists, with individual treatment and group exercises focussing more on improving fine motor skills. Patients' progress is monitored weekly in meetings with the doctor and social worker. Before the patient is discharged, physiotherapists and occupational therapists repeat the measurements to assess the patient's condition when the rehabilitation has been completed. The results show that after geriatric rehabilitation, patients generally show an improvement in mobility, walking ability and fine motor development, which translates into greater independence for the individual. In addition, patients and their relatives are educated about ergonomic solutions as part of the rehabilitation programme, as this is an important measure to prevent falls in the home environment.

Conclusions: Geriatric rehabilitation is not only important for the individual, but also has wider societal benefits. In order to follow the guidelines of the healthcare development strategy and actively shape future programmes for a healthy society, we aim to upgrade the geriatric rehabilitation programme with additional activities in both physiotherapy and occupational therapy and explore the possibility of offering certain activities at home.

Keywords: older adults, quality of life, active ageing

Spremembe togosti ledvenih mišic po ponavljajočem sklanjanju

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Uvod: Ponavljajoče sklanjanje (PS) sodi med pomembnejše dejavnike tveganja za pojav bolečine v spodnjem delu hrbta pri delovno aktivni populaciji. Izkazalo se je, da daljša trajanja PS vodijo v povečanje intrinzične togosti trupa. Avtorji predhodnih raziskav so predpostavljali, da je slednje posledica povišane togosti mišic. Kolikor je v naši vednosti, trenutno ni dostopnih raziskav o spremembah togosti ledvenih mišic po PS. Poleg tega se zdi smiselno primerjati odzive med spoloma. Namen raziskave je bil ovrednotiti učinke PS na togost ledvenih mišic in primerjati odzive med spoloma.

Metode: V raziskavo je bilo vključenih 16 zdravih prostovoljcev. Strižni količnik m. erector spinae in m. multifidus smo merili v mirovanju obojestransko z uporabo elastografije strižnih valov. Preiskovanci so opravili 60-min protokol PS, ki je zajemal 40 ponovitev ohranjanja predklona (60 s) z vmesnimi 30 s odmori vzravnane nepodprtega sedenja. Meritve so bile opravljene pred in po PS. Podatki so bili analizirani z mešanim modelom analize variance za ponovljene meritve z dvema dejavnikoma znotraj (čas in mišica) in enim dejavnikom med preiskovanci (spol). V primeru statistično značilne interakcije, smo opravili post-hoc teste z Bonferronijevo korekcijo.

Rezultati: Naši rezultati niso pokazali značilnega interakcijskega učinka čas × mišica × spol ($p = 0,60$; $\eta^2 = 0,05$), čas × spol ($p = 0,78$; $\eta^2 = 0,01$) ali učinka spola ($p = 0,46$; $\eta^2 = 0,04$). Po drugi strani smo ugotovili značilen učinek časa ($p < 0,01$; $\eta^2 = 0,65$), mišice ($p < 0,01$; $\eta^2 = 0,58$) in interakcijski učinek mišica × spol ($p = 0,01$; $\eta^2 = 0,25$). Post-hoc testi so pokazali mejno značilno višjo togost m. multifidus na desni strani pri moških v primerjavi z ženskami ($p = 0,05$). Po PS se je togost levega in desnega m. erector spinae povišala za 8,17 in 6,43 %, medtem ko se je togost levega in desnega m. multifidus povišala za 15,38 in 8,76 %

Razprava in zaključek: Ugotovitve naše raziskave kažejo, da PS vodi v povišanje togosti ledvenih mišic. Poleg tega se je izkazalo, da so omenjeni odzivi primerljivi med spoloma. Mehanizem v ozadju povišanja togosti ledvenih mišic zaenkrat ni jasen. Čeprav bi ugotovljene spremembe lahko bile povezane z izometričnim obremenjevanjem iztegovalk trupa, dokazi kažejo na znižanje togosti ledvenih mišic po izometričnem utrujanju. Povišanje togosti ledvenih mišic bi lahko bila kompenzacija za znižano togost vezivnega tkiva, ki je bila dosledno poročana v predhodnih raziskavah. Višja togost ledvenih mišic bi lahko vodila v višje kompresijske obremenitve hrbteničnih struktur in posledično povečala tveganje za pojav ali vztrajanje bolečine v spodnjem delu hrbta v delovno aktivni populaciji.

Ključne besede: mehanske lastnosti mišic, upogib trupa, strižni količnik, m. erector spinae, m. multifidus

Changes of lumbar muscle stiffness following spinal flexion exposure

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Introduction: Spinal flexion exposure (SFE) is considered as an important risk factor for the occurrence of low back pain in working-age adults. Evidence suggests that longer durations of SFE lead to increased intrinsic trunk stiffness. Authors of previous studies have speculated that the latter is a consequence of increased muscle stiffness. To the best of our knowledge, there are currently no available studies on the changes in lumbar muscle stiffness following SFE. Furthermore, the comparison of the response between genders warrants investigation. Therefore, the aim of our study was to evaluate the effect of SFE on lumbar muscle stiffness and to compare the response between genders.

Methods: Our study sample included 16 healthy young volunteers. Erector spinae and multifidus resting shear modulus was measured bilaterally using shear wave elastography. The participants completed a 60-min intermittent SFE protocol, which consisted of 40 repetitions of static spinal flexion (60 s) interspersed with 30 s of unsupported upright sitting. The measurements were completed prior to and following the SFE protocol. Data were analysed using a mixed-method repeated measures analysis of variance with two within- (time and muscle) and one between- (gender) subject factor. For statistically significant interactions, post-hoc tests were completed using the Bonferroni correction.

Results: Our results did not show a significant time \times muscle \times gender ($p = 0.60$; $\eta^2 = 0.05$), time \times gender interaction ($p = 0.78$; $\eta^2 = 0.01$) or gender effect ($p = 0.46$; $\eta^2 = 0.04$). On the other hand, we found a significant time ($p < 0.01$; $\eta^2 = 0.65$), muscle ($p < 0.01$; $\eta^2 = 0.58$) and muscle \times gender effect ($p = 0.01$; $\eta^2 = 0.25$). The post-hoc tests revealed marginally significantly higher right multifidus stiffness in males compared to females ($p = 0.05$). Following SFE, left and right erector spinae shear modulus increased by 8.17 and 6.43 %, respectively, whereas left and right multifidus shear modulus increased by 15.38 and 8.76 %, respectively.

Discussion and conclusions: The main finding of our study is that SFE leads to increased lumbar muscle stiffness. Furthermore, this response appears to be comparable between genders. The exact mechanism for increased lumbar muscle stiffness remains debatable. Although this finding may be related to isometric loading of the trunk extensors, evidence suggests that isometric fatigue leads to a reduction in resting lumbar muscle stiffness. Increased lumbar muscle stiffness may serve as a compensation for reduced connective tissue stiffness, which has been frequently reported in previous studies. Higher lumbar muscle stiffness may result in increased compressive loading of spinal tissues, thus elevating the risk for the development or persistence of low back pain in working-age adults.

Keywords: muscle mechanical properties, bending, shear modulus, erector spinae, multifidus, elastography

Varovanje pacientov pred nezaželenimi dogodki v operacijski dvorani

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Uvod: Operativni posegi so med delovno populacijo precej pogosti. Po podatkih je 20 % posameznikov v omenjenem obdobju izpostavljenih kirurški oskrbi. Ob izvajanju le te prihaja do napak in neželenih dogodkov, ki jih povzročijo zdravstveni delavci. V prispevku smo želeli raziskati, kateri so najpogostejši nezaželeni dogodki v medoperativnem obdobju ter na kakšen način paciente obvarujemo pred njimi.

Metode: Izvedli smo integrativni pregled literature v skladu s PRISMA smernicami. Literaturo smo pridobili iz podatkovnih baz COBISS, PubMed, CINAHL, Google učenjak, DiKUL in Science Direct. Iskali smo za časovno obdobje med letoma 2014 in 2024 ter uporabili Boolova operaterja AND in OR. Ključne besede so bile nanizane v slovenskem in angleškem jeziku, povezane z operacijsko dvorano, neželenimi dogodki, varnostjo, pacienti in zdravstvenimi delavci.

Rezultati: V vseh bazah je bilo identificirano 14. 243 zadetkov. Po pregledu literature glede na PRISMA smernice, smo vključili 12 člankov. Najpogostejši neželeni dogodki v operacijski dvorani vključujejo okužbe rane, krvavitve, težave z dihanjem, alergijske reakcije na zdravila, poškodbe živcev, zlome kosti, ter pooperativne bolečine. Za zagotavljanje dobro opravljenega dela v operacijski dvorani, so ključne dobro usposobljene operativne medicinske sestre. Pomembno je, da znajo pravočasno prepoznati potencialne nevarnosti za pacienta in ustrezno ukrepati. Za doseganje tega znanja je potrebno zagotoviti dosledno in ustrezno izobraževanje na področju medoperativne zdravstvene nege. Medoperativna nega zajema specializirana področja, pri katerih je potrebno poznati in razumeti človeka kot celoto, njegovo anatomijo, fiziologijo ter bolezni ter tehnično znanje o napravah, instrumentih in postopkih sterilizacije. V veliki meri je varnost pacienta odvisna od funkcioniranja operacijskega tima. Pomanjkanje timskega dela in komunikacije namreč vodita v slabšo oskrbo v vseh fazah zdravljenja pacienta. Dobro komunikacijo podpremo s pravilnim dokumentiranjem in uporabo kirurških varnostnih protokolov. Ti pripomorejo k zagotavljanju, da so opravljene vse potrebne priprave in varnostni postopki, kar zagotavlja večjo varnost pacienta. Za preprečevanje neželenih dogodkov pa je potrebna tudi vsa delujoča oprema in instrumenti, ki jo je potrebno vzdrževati in redno pregledovati.

Razprava in zaključek: Stalno izboljševanje praks in implementacija novih tehnologij sta ključna za zagotavljanje najvišje možne ravni varnosti v operacijski dvorani. Pojavlja se tendenca po uvedbi podiplomskega izobraževanja za operacijske medicinske sestre, saj je njihova usposobljenost nepogrešljiva za zagotavljanje varnosti pacientov med operacijo. S pravilnim usposabljanjem osebja ter uporabo standardiziranih protokolov lahko zmanjšamo incidenco neželenih dogodkov in izboljšamo kakovost oskrbe vseh pacientov ter poskrbimo za hitrejšo vrnitev na delo.

Ključne besede: varnost, pacient, strokovne napake, nezaželeni dogodki, operacija

Security of patients against unwanted events in the operating theatre.

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Introduction: Surgical interventions are quite common in the working population. According to data, 20% of individuals are exposed to surgical care during this period. In the process, errors and adverse events caused by healthcare workers occur. The aim of this paper was to investigate the most common adverse events that occur during the perioperative period and to identify ways to protect patients from them.

Methods: We conducted an integrative literature review according to PRISMA guidelines. Literature was collected from COBISS, PubMed, CINAHL, Google Scholar, DIKUL and Science Direct databases. We searched between 2014 and 2024 and used Boolean AND and OR operators. Keywords were generated in both Slovenian and English, related to operating room, adverse events, safety, patients and healthcare workers.

Results: There were 14,243 hits identified in all databases. After reviewing the literature against the PRISMA guidelines, we included 12 articles. Most common adverse events in the operating room include wound infections, bleeding, breathing problems, allergic reactions to drugs, nerve damage, bone fractures, and post-operative pain. Well-trained OR nurses are essential to ensure a job well done in the operating theatre. It is important that they are able to identify potential hazards to patient in time and take appropriate action. To achieve this knowledge, consistent and appropriate education in perioperative nursing must be provided. Perioperative care covers specialised areas that require knowledge and understanding of the whole person, their anatomy, physiology and diseases, as well as technical knowledge of equipment, instruments and sterilisation procedures. Patient safety depends to a large extent on the functioning of the operating team. Lack of teamwork and communication leads to poorer care at all stages of the patient's treatment. Good communication is supported by proper documentation and the use of surgical safety protocols. This helps to ensure that all the necessary preparations and safety procedures are carried out, ensuring greater patient safety. However, all working equipment and instruments also need to be maintained and regularly inspected to prevent adverse events.

Discussion and conclusion: Continuous improvement of practices and the implementation of new technologies are key to ensuring the highest possible level of safety in the operating room. There is a tendency to establish postgraduate training for OR nurses, as their competence remains crucial to ensure patient safety during surgery. With proper staff training and the use of standardised protocols, we can reduce the incidence of adverse events and improve the quality of care for all patients, resulting in a quicker return to work.

Keywords: safety, patient, professional errors, adverse events, surgery

Kadilske navade starejših odraslih v Sloveniji – analiza klicev na Quitline

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Uvod: Starejši kadilci imajo večje tveganje za resne bolezenske zaplete in smrt. Prenehanje kajenja v visoki starosti ima številne prednosti, a so starejši odrasli pogosto spregledani. Literatura, objavljena v zadnjih petih letih navaja različne podatke, o kajenju starejših od 65 let, med 8-12 % svetovne populacije. Svetovni dan brez tobaka 2023 navaja, da je potrebno intervencije za prenehanje kajenja usmeriti tudi na starejše kadilce. Analiza 10 evropskih držav je pokazala, da spremembe tobačne zakonodaje niso zmanjšale prevalece kajenja pri starejših od 65 let.

Metode: Uporabljena je bila kvalitativna analiza vsebine sekundarnih virov. Podatki so bili pridobljeni iz zapisanih povzetkov klicev na slovenski telefon za pomoč pri opuščanju kajenja (Quitline) v letu 2022. Uporabljen je bil namenski vzorec zapisov poteka anonimnih telefonskih pogovorov s starejšimi od 60 let.

Rezultati: V enem letu je na Quitline poklicalo 43 starejših odraslih. Njihova povprečna starost je bila 67 let, kadijo v povprečju več kot 45 let, po 20 cigaret dnevno. Po več desetletjih kajenja imajo vsi najmanj eno izkušnjo opuščanja, ponovno pa pričnejo kaditi zaradi stresnih sprememb v življenjskih okoliščinah. Kajenje vzdržuje dolgčas oziroma pomanjkanje aktivnosti. Pri več klicalcih so svetovalci zaznali znake, ki nakazujejo na težave v duševnem zdravju. Starejši odrasli zelo pogosto kadijo ob pitju kave, ženske pa rajši kadijo same, kot v družbi. Veliko jih še vedno kadi v zaprtih prostorih. Najpogosteje omenjene zdravstvene težave s strani klicancev so bile: arterijska hipertenzija, stari miokardni infarkt, težko dihanje, kašelj, KOPB, astma, sladkorna bolezen. Zdravstvene težave in prihranek denarja sta bila najpogostejša motivacijska dejavnika za opuščanje. Pogosto so si želeli hitre rešitve za prenehanje.

Razprava in zaključki: Le dobra polovica starejših kadilcev ve, da kajenje škoduje zdravju. Menijo, da opustitev kajenja ne bi izboljšala njihovega zdravja in da pasivno kajenje ni škodljivo. Manj znanja imajo tisti z nižjo stopnjo izobrazbe. Poleg fiziološkega vzroka zasvojenosti je glaven dejavnik vzdrževanja kajenja osamljenost. Ko starejša oseba pokliče na Quitline, je ključno, da prepoznamo potrebo po iskanju rešitev na področju osamljenosti. Dobra praksa je usmeritev starejšega odraslega k oblikam pomoči v njegovem lokalnem okolju. Starejši kadilci imajo drugačne potrebe kot druge starostne skupine. Vsi, ki se srečujejo s starejšimi kadilci, naj bi te potrebe znali identificirati in znali nuditi ustrezno pomoč. Quitline naj bo vedno ena izmed možnosti, ki jih ponudimo v stiku s starejšim kadilcem.

Ključne besede: starejši odrasli, kajenje, opuščanje, Quitline

Smoking habits of older adults in Slovenia – analysis of Quitline calls

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Introduction: Older smokers have a higher risk of serious health complications and death. Quitting smoking in old age has many benefits, but older adults are often overlooked. Literature published in the last five years cites various percentages of older smokers worldwide, between 8 to 12 % of people over the age of 65.. World No Tobacco Day 2023 states that smoking cessation interventions should also target older smokers. An analysis of 10 European countries showed that changes in legislation did not reduce the prevalence of smoking among people over 65 years of age.

Methods: A qualitative content analysis of secondary sources was used. The data were obtained from the recorded summaries of calls to the Slovenian telephone line for smoking cessation (Quitline) in 2022. A purposeful sample of the records of anonymous telephone conversations with people over 60 years of age was used.

Results: 43 older adults contacted Quitline in one year. Their average age was 67 years, they had been smoking for an average of more than 45 years, 20 cigarettes a day. After several decades of smoking, they all had at least one experience of quitting. They mostly relapsed due to stressful changes in life circumstances. Smoking is perpetuated through boredom or lack of activity. In several callers, counselors detected signs that may point to psychiatric health problems. Older adults often smoke while drinking coffee and women prefer to smoke alone rather than in company. Many of them still smoke indoors. The most frequently mentioned health problems by older smokers were: arterial hypertension, old myocardial infarction, shortness of breath, cough, COPD, asthma, diabetes. Health problems and saving money were the most common motivational factors for quitting. They often wanted quick quitting solutions.

Discussion and conclusions: Only about a half of older smokers know that smoking is harmful. They believe that quitting would not improve their health and that passive smoking is not harmful to others. Those with a lower level of education have less knowledge. In addition to the physiological cause of addiction, the main factor in maintaining smoking is loneliness. When an elderly person contacts Quitline, it is crucial to recognise the need for solutions in the aspect of loneliness. It is good practice to direct the elderly towards forms of assistance in their local environment. Elderly smokers have different needs than other age groups. Everyone who comes in contact with older smokers should be able to identify these needs and be able to provide appropriate help. QUITLINE should always be offered as one of the options when working with an older smoker.

Keywords: older adults, smoking, cessation, Quitline

Ocena kvalitete življenja pri odraslih z atopijskim dermatitisom in aknami

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Uvod: Atopijski dermatitis (AD) in akne (AK) sta kožni bolezni, ki pomembno vplivata na kakovost življenja (KŽ) obolelih posameznikov. Obe bolezni nista le neprijetni z vidika telesnih simptomov, temveč prinašata tudi psihološko in socialno breme, ki lahko vpliva na vsakodnevne dejavnosti, samozavest in splošno dobro počutje. Dermatološki indeks kakovosti življenja (DLQI) je pogosto uporabljeno orodje za ocenjevanje vpliva kožnih bolezni na KŽ bolnikov. Namen raziskave je bil s pomočjo vprašalnika DLQI oceniti vpliv AD in AK na KŽ pri odraslih.

Metode: Za oceno KŽ pri odraslih bolnikih z AD in AK smo izvedli presečno raziskavo z uporabo vprašalnika DLQI. V raziskavo je bilo vključenih 798 odraslih oseb (18 - 49 let) z diagnozo AD ali AK (vendar ne obeh hkrati), ki so izpolnili vprašalnik DLQI v celoti preko spletnega orodja IKA v obdobju 28. 11. 2022 - 28. 2. 2023, pri čemer smo prejeli odgovore 304 bolnikov (od tega 76,6 % žensk) z AD in 494 bolnikov (od tega 66,6 % žensk) z AK. Podatke smo statistično analizirali s pomočjo programske opreme IBM SPSS (verzija 27.0), da bi primerjali vpliv AD in AK na KŽ bolnikov ter ugotovili morebitne pomembne razlike med obema skupinama glede na spol in starost bolnikov s pomočjo opisnih in interferenčnih statističnih metod. Naredili smo tudi teste normalne porazdelitve podatkov, s katerimi smo upravičili izbiro neparametričnih statističnih metod (Kruskal Wallis in Mann Whitney U test).

Rezultati: V povprečju so ženske dosegle več točk (12,13 pri AD in 9,07 pri AK) kot moški (9,68 pri AD in 6,63 pri AK), kar kaže na večje breme bolezni na KŽ pri ženskah. Mlajši odrasli (18-24 let) z AD so v povprečju dosegli manj točk (11,25) kot drugi odrasli (25-49 let) z AD (12,59), kar kaže na morebitno večje breme AD kasneje v življenju. Mlajši odrasli z AK so v povprečju dosegli podobno število točk (8,65) kot starejši odrasli z AK (8,64), kar kaže na majhno razliko v vplivu starosti na KŽ pri bolnikih z AK. Med bolniki z AD in AK so bile statistično pomembne razlike ($p < 0,01$) glede na bolezen in spol na ravni stopnje značilnosti $\alpha = 0,01$, medtem ko so bile med različnimi starostnimi skupinami odraslih z AD in AK ugotovljene majhne ali statistično nepomembne razlike ($p > 0,05$).

Razprava in zaključki: V tej študiji smo skušali poudariti potrebo po celostnih strategijah zdravljenja, ki obravnavajo tako telesne kot psihosocialne vidike AD in AK. Zdravstveni delavci bi se morali zavedati predvsem izrazitega vpliva kožnih bolezni na KŽ bolnikov, še posebej pri ženskah in starejših posameznikih, ter razmisliti o dodatnih prilagojenih ukrepih za ublažitev tega bremena. Bistvene razlike med vplivi AD in AK na KŽ kažejo tudi na to, da morajo biti strategije zdravljenja bolnikov prilagojene posameznemu bolniku, pri čemer je treba upoštevati specifične izzive, ki jih prinašajo posamezne kožne bolezni. S to študijo poudarjamo ključni pomen nadaljnega ocenjevanja KŽ s pomočjo orodij kot je DLQI v vsakodnevni klinični praksi.

Ključne besede: kvaliteta življenja, atopijski dermatitis, akne, odrasli, DLQI

Assessment of quality of life in adults with atopic dermatitis and acne

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Introduction: Atopic dermatitis (AD) and acne (AC) are skin diseases that have significant impact on the quality of life (QoL) of affected individuals. Both diseases are not only unpleasant in terms of physical symptoms, but also bring psychological and social burdens that can affect daily activities, self-esteem and general well-being. The Dermatology Life Quality Index (DLQI) is a widely used tool to assess the impact of skin diseases on the QoL of patients. The aim of this study was to assess the impact of AD and AC on QoL in adults using the DLQI questionnaire.

Methods: A cross-sectional study using the DLQI questionnaire was conducted. The study included 798 adults (18-49 years) diagnosed with AD or AC (but not both at the same time) who completed the DLQI questionnaire in full via the IKA online tool during the period 28/11/2022 - 28/02/2023, receiving responses from 304 patients (76.6% female) with AD and 494 patients (66.6% female) with AC. The data were statistically analysed using IBM SPSS software (version 27.0) to compare the impact of AD and AC on patients' QoL and to identify any significant differences between the two groups according to patients' sex and age using descriptive and inferential statistical methods. We performed tests of normal data distribution to justify the choice of non-parametric statistical methods (Kruskal Wallis and Mann Whitney U test).

Results: On average, women scored higher points (12,13 for AD and 9,07 for AC) than men (9,68 for AD and 6,63 for AC), indicating a higher disease burden on QoL in women. Younger adults (18-24 years) with AD scored an average less points (11,25) than other adults (25-49 or more years) with AD (12,59), indicating a possible higher burden of AD later in life. Younger adults with AC scored an average similar points (8,65) than older adults with AC (8,64), indicating little to no significant difference in the impact of age on QoL in patients with AC. There were statistically significant differences ($p < 0.01$) based on disease pathology and gender, at the $\alpha = 0.01$ level of significance between patients with AD and AC, whereas little to no statistically significant differences ($p > 0.05$) were found between different groups of adults with AD and AC.

Discussion and conclusions: In this study we aimed to highlight the need for holistic treatment strategies that address both the physical and psychosocial aspects of AD and AC. In particular, health professionals should be aware of the marked impact of skin diseases on the QoL of patients, especially in women and older individuals, and consider additional tailored interventions to mitigate this burden. The differences between the impact of AD and AC on QoL also suggests that patient treatment strategies should be tailored to the individual patient, taking into account the specific challenges posed by each skin disease. This study also highlights the importance of QoL assessment using tools such as the DLQI in clinical practice.

Keywords: quality of life, atopic dermatitis, acne, adults, DLQI

Vpliv dojenja na preprečevanje kasnejših srčno-žilnih dogodkov pri otročnicah po carskem rezu z zmerno gestacijsko hipertenzijo ali preeklampsijo: pregled literature

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Uvod: Preeklampsija velja za sindrom, etiologija pa še vedno ni povsem pojasnjena. Začetek je po približno 20. tednu nosečnosti z dokazano motnjo funkcioniranja organov ali uteroplacentarnega delovanja in/ali proteinurijo. Številne študije so pokazale, da je preeklampsija povezana s povečanim tveganjem za nekatere najpogostejše zaplete. Dojenje je eden od učinkovitih ukrepov nefarnakološkega obvladovanja hipertenzije ter ostalih involucijskih procesov v popoordnetem obdobju in je povezano s koristmi tudi za zdravje dojenčkov. Prednosti dojenja za matere vključujejo hitrejšo involucijo maternice po carskem rezu in vaginalnem porodu ter manjše tveganje za poporodno krvavitev. Pri ženskah, ki so dojile vsaj dve leti, je bila verjetnost za razvoj koronarne bolezni za 37 % manjša kot pri ženskah, ki niso dojile.

Metode: Izvedli smo pregled literature objavljenih znanstvenoraziskovalnih člankov, o vplivu dojenja pri preeklampsijskih bolnicah in tveganju za srčno-žilne dogodke. Iskanje je potekalo v podatkovnih zbirkah PubMed Central, ScienceDirect in Google Scholar. Uporabljene so bile naslednje ključne besede: »carski rez«, »krvni tlak«, »zapleti«, »zdravljenje«, »dojenje«. Rezultati so bili analizirani s tematsko analizo ugotovitev kvalitativnih in kvantitativnih študij. Iskanje literature je potekalo z osemletnim zamikom od objave. Deset člankov, vključenih v naš pregled literature, je izpolnjevalo vsa merila za vključitev. Pregled literature je bil ocenjen glede primernosti za vključitev v pregled literature na podlagi smernic.

Rezultati: Spodbujanje prvega poskusa dojenja ima pomembno vlogo pri preprečevanju pojavnosti srčno-žilnih dogodkov. Prav tako tudi različni pristopi k opredelitvi trajanja dojenja kot preventivnega ukrepa. Skupaj lahko ti ukrepi vplivajo na duševno zdravje in zmanjšajo tveganje za srčno-žilne dogodke za približno 13 %. Povprečne vrednosti sistoličnega krvnega tlaka pri pacientkah, ki so dojile več kot 6 mesecev, so bile pomembno nižje ($p = 0,04$) v primerjavi s tistimi, ki so dojile približno 3-6 mesecev. Za preprečevanje poporodne hipertenzije je zelo pomembna povezanost z laktacijo in dojenjem pri prejšnjih porodnih izkušnjah. Različne študije kažejo na optimalno trajanje dojenja po carskem rezu, ki se giblje od najmanj 6 mesecev do do 12 mesecev. Dojenčki so bili v povprečju dojeni 15,6 meseca. S takšnim trajanjem dojenja so bolniki zmanjšali tveganje za srčno-žilne dogodke v kasnejšem življenju za 11 %.

Razprava in zaključki: Ugotavljamo, da imajo otročnice slabše izide dojenja predvsem zaradi obvladovanja simptomov preeklampsije. To vpliva na kvaliteto življenja otročnice, lažje povezovanje in samostojnejšo skrb za novorojenčka.

Ključne besede: carski rez, krvni tlak, komplikacije, zdravljenje, dojenje

Impact of breastfeeding on prevention of later cardiovascular events in patients after cesarean section with moderate gestational hypertension and pre-eclampsia: literature review

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Introduction: Preeclampsia is considered a syndrome, and the aetiology is still not fully understood. Several studies have shown that pre-eclampsia is associated with increased risk of some of the most common complications due to cardiovascular events, even after adjustment and identification of risk factors. Breastfeeding has benefits for mother, including a faster process of involution in the postpartum period and a lower risk of post-partum hemorrhage. Women who breastfed for two years were 37% less likely to develop coronaropathy than women who did not breastfeed.

Methods: We performed a literature review of published scientific research articles reporting on the impact of breastfeeding in pre-eclamptic patients and the risk of cardiovascular events. The search was conducted in PubMed Central, ScienceDirect and Google Scholar. The following keywords were used: »caesarean section«, »blood pressure«, »complications«, »treatment«, »breastfeeding«. The results were analysed by thematic analysis of qualitative and quantitative study findings. The literature search was conducted with an eight-year lag from publication. The 10 articles included in our literature review met all the inclusion criteria. The literature review was assessed for eligibility for inclusion in the literature review based on the guidelines.

Results: Encouraging the first breastfeeding play an important role in preventing the incidence of cardiovascular events. Also, different approaches to define the duration of breastfeeding as a preventive measure. Taken together, these measures can affect mental wellbeing and reduce the risk of cardiovascular events by around 13%. Mean systolic blood pressure values in patients who breastfed more than 6 months were significantly lower ($p = 0.04$) compared to those who breastfed approximately 3- 6 months. For the prevention of postpartum hypertension, the association with lactation and breastfeeding in previous birth experiences is very important. Different studies indicate an optimal duration of breastfeeding after cesarean section ranging from minimum of 6 months up to up to 12 months. On average infants were breastfed for 15.6 months. With this duration of breastfeeding, patients reduced their risk of cardiovascular events by 11% in later life.

Conclusion: We find that patients have worse breastfeeding outcomes, even when they are supported and encouraged to breastfeed, especially in the early postnatal period. This has an impact on the quality of life of the woman who has given birth, making it easier for her to bond and to care for her newborn more independently.

Keywords: caesarean section, blood pressure, complications, treatment, breastfeeding

Patronažna medicinska sestra v vlogi varovanja starejših v lokalni skupnosti

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Izhodišča in namen: Prispevek obravnava povezanost vse večjega deleža starejših od 65 let in njihovih potreb po zdravstveni oskrbi ter storitvami, ki jih zagotavljajo patronažne medicinske sestre. Delo patronažne medicinske sestre s starejšimi odraslimi vključuje: ugotavljanje potreb po zdravstveni negi na domu, načrtovanje, izvajanje in vrednotenje zdravstvene nege. Velik del te skupine prebivalstva ne potrebuje stalne oskrbe, vendar pa s starostjo upada njihova funkcionalna sposobnost, kar povečuje potrebo po zdravstveni negi in podpori, za kar so najbolj kompetentne patronažne medicinske sestre.

Predstavitev vsebine: Republika Hrvaška ima po popisu prebivalstva z leta 2021, 3.871.833 prebivalcev, delež prebivalstva starega 65 in več let, pa predstavlja 22,45 % (Hrvaški državni zavod za statistiko). Glede na to, da so starejši odrasli izpostavljeni večjemu tveganju za pojav kroničnih bolezni in invalidnosti, je večja verjetnost, da bodo potrebovali zdravstvene storitve. Skrb za starajočo se populacijo zahteva zadostno raven znanja in veščin s področja gerontologije vključno z razumevanjem normalnega procesa staranja in pričakovanih sprememb, kot so psihološke, psihosocialne, funkcionalne in kognitivne spremembe. Potrebno je tudi poznavanje zdravstvenih potreb, kroničnih težav, zdravstvene nege ter promocije zdravja pri starejših odraslih. To pomeni, da bi morale patronažne medicinske sestre pripraviti individualen načrt oskrbe s ciljem preprečevanja funkcionalnega upada in ohranjanja zdravja. Glavni cilj patronažne dejavnosti pri oskrbi starejše odrasle populacije je zagotoviti, da patronažne medicinske sestre razumejo načrtovanje oskrbe kroničnih pacientov ter spodbujajo zdravo staranje in aktivnosti za zmanjševanje vpliva s starostjo povezanih bolezni in invalidnosti. Patronažna medicinska sestra predstavlja vezni člen med družino in vrsto drugih storitev, ki so na voljo v lokalni skupnosti. Družino napoti na posamezne storitve, pri čemer upošteva varovanje interesov in pravic starejših odraslih. Patronažne medicinske sestre preko patronažnih obiskov izvajajo ukrepe vseh stopenj preventive, prepoznavajo tveganja ter ozaveščajo in sodelujejo z drugimi sektorji za podporo posamezniku in njegovi družini. V prispevku bodo predstavljeni nacionalni normativi in standardi patronažnih medicinskih sester, smernice za izvajanje zdravstvenega varstva na patronažnem področju, število zdravstvenih delavcev, ki izvajajo zdravstveno nego na domu, po županijah v letu 2022 ter porazdelitev števila obiskov patronažnih medicinskih sester pri starejših odraslih in število ugotovljenih bolezni in stanj v zdravstveni negi na domu, razdeljeno po skupinah bolezni in starostnih skupinah uporabnikov na Hrvaškem v letu 2022.

Sklepne ugotovitve: Kompleksne intervencije, kot sta geriatrična ocena in spremljanje skupnosti, lahko podpirajo starejše odrasle pri samostojnem življenju. Programi so celovitem modelu skupnostne oskrbe šibkih starejših, patronažne medicinske sestre so pri tem nepogrešljive članice interdisciplinarnega gerontološko/geriatričnega tima pri varovanju zdravja starejših odraslih.

Ključne besede: zdravstvena nega, zdravstveno varstvo, starejši odrasli, skupnost

Community nurse in the role of protecting the elderly in the local community

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Introduction and purpose: The paper deals with the association of the increasing proportion

of people over the age of 65 and their needs with the health services provided by community nurses. The work of a community nurse with older adults includes: assessing the needs for health care of older adults in their home, planning of health care, implementation of health care and evaluation. Much of this population group does not need continuous care, however, with increasing age, the functional ability of the older adults is also declining, which is the reason why care and support are needed, and community nurses are in the best position to provide such care.

Content presentation: According to the 2021 Census, the Republic of Croatia has 3 871 833 inhabitants, while the share of the population aged 65 and over is 22.45% (Croatian Bureau of Statistics). Considering that older adults are at higher risk for chronic diseases and disabilities, they therefore are more likely to need health services. Caring for an aging population requires a sufficient level of knowledge and skills associated with gerontology. This includes understanding the normal aging process and expected changes such as physiological, psychosocial, functional and cognitive changes common health needs, chronic problems and care, as well as the application of the concept of health promotion for older adults. This indicates that community nurses should provide an individualized care plan, with the aim of preventing functional decline and ensuring the maintenance of health. The main objective of community activities in the care of the older adult population is to ensure that the community nurses understand care planning for chronic patients and promote healthy ageing and activities to reduce the impact of age-related diseases and disabilities. The community nurse represents a link, i.e. a bridge between the family and a whole range of other services available to her in the local community, the nurse refers the family to individual services, taking into account the protection of the interests and rights of the older adults family. Through home/, the community nurses implement measures of all levels of prevention, they identify the risks, and instruct and collaborate with other sectors to support a person and their family in need. The paper will present national norms and standards of community nurses, guidelines for the implementation of health care in the field of community care, the number of health professionals who carry out health care in the home, by counties in 2022 and the distribution of the number of visits of community nurses to the older adults and the number of identified diseases and conditions in home health care, by groups of diseases and age groups of users in Croatia in 2022.

Conclusions: Complex interventions such as geriatric assessment and community monitoring have the potential to support the older adults to live independently. The programmes are comprehensive models of community care for the weak older adults and community nurses are indispensable members of the interdisciplinary Gerontology/ Geriatric Team in protecting the health of the older adults

Keywords: nursing, health care, older adults, community

Sekcija/Section

Uporaba IKT rešitev na področju zdravja delovno aktivnih in starejših odraslih

ICT solutions for health of working-age and older
adults

Vabljeni predavanje

Dejavniki uporabe pametnih telefonov med starejšimi odraslimi: Oblikovanje stališč do uporabe in zaznane uporabnosti

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Uvod: Prebivalstvo se postopoma stara tako v Sloveniji kot tudi drugod po Evropi. Pametni telefoni so v zadnjih letih postali univerzalno dostopni praktično vsem generacijam, vključno s starejšimi odraslimi. Kljub temu, da lahko pametni telefoni pripomorejo k obogatitvi vsakdanjega življenja starejših odraslih, pa opazen delež starejših odraslih pametnih telefonov nima ali ne uporablja. V okviru projekta e@ser smo se osredotočili na identifikacijo dejavnikov, povezanih z oblikovanjem stališč do uporabe in percepcij o uporabnosti, vključno z zaznanimi grožnjami pri uporabi pametnih telefonov.

Metode: V tem prispevku bomo predstavili ključne ugotovitve presečne študije med starejšimi odraslimi v Sloveniji (N=535). Anketni vprašalnik je bil oblikovan za merjenje 11 konstruktov: namera za uporabo, stališča do uporabe, subjektivna norma, preprostost uporabe, zaznana uporabnost, hedonistična motivacija, olajševalne okoliščine, zaznana grožnja, anksioznost, strah pred uporabo in zavračanje koristi. Povezave med konstrukti smo testirali s strukturnim modeliranjem (CB-SEM) na celotnem vzorcu ter podvzorcih glede na uporabo pametnih telefonov.

Rezultati: Rezultati raziskave nakazujejo, da namero za uporabo dobro razlagajo subjektivna norma, zaznana uporabnost in stališča do uporabe. Stališča do uporabe so povezana s hedonistično motivacijo, zaznana uporabnostjo in anksioznostjo. Zaznana uporabnost pa je povezana s preprostostjo uporabe, zavračanjem koristi, strahom pred uporabo in zaznana grožnja. Pri vzorcu starejših odraslih, ki pametne telefone uporabljajo, je velikost učinka zaznane uporabnosti na namero za uporabo signifikantno nižja kot pri vzorcu starejših odraslih, ki pametnih telefonov ne uporabljajo. Med vzorcema se razlikujejo tudi dejavniki, povezani z zaznano uporabnostjo, saj je velikost učinka preprostosti uporabe signifikantno nižja, velikost učinka zavračanja koristi pa signifikantno višja pri vzorcu starejših odraslih, ki pametne telefone uporabljajo.

Razprava in zaključki: Raziskava ponuja vpogled v dejavnike sprejemanja pametnih telefonov med starejšimi odraslimi, vključno z zaznanimi grožnjami pri uporabi pametnih telefonov. Nakazala je na potrebo po ločenem obravnavanju starejših odraslih, ki pametne telefone uporabljajo, in tistih, ki jih ne. Objavo je sofinancirala Javna agencija za znanstvenoraziskovalno in inovacijsko dejavnost Republike Slovenije (J5-3111).

Ključne besede: starejši odrasli, pametni telefoni, sprejemanje tehnologij, varna uporaba pametnih naprav

Invited lecture

Determinants of smartphone use among older adults: Shaping of attitude toward use and perceived usefulness

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Introduction: The population is gradually aging both in Slovenia and elsewhere in Europe. In recent years, smartphones have become universally available to virtually all generations, including older adults. Even though smartphones can contribute to enriching the daily lives of older adults, a significant proportion of older adults do not own or use smartphones. As part of the e@ser project, we focused on the identification of factors related to the formation of attitude toward use and perceived usefulness, including perceived threats while using smartphones.

Methods: In this contribution, we will present the key findings of a cross-sectional study among older adults in Slovenia (N=535). The questionnaire was designed to measure 11 constructs: intention to use, attitude toward use, subjective norm, ease of use, perceived usefulness, hedonic motivation, facilitating conditions, perceived threats, anxiety, fear of use, and rejection of benefits. Associations between constructs were tested using structural modeling (CB-SEM) on the entire sample and sub-samples based on the use of smartphones.

Results: The research results indicate that intention to use is well explained by subjective norm, perceived usefulness, and attitude toward use. Attitude toward use is related to hedonic motivation, perceived usefulness, and anxiety. Perceived usefulness is related to ease of use, rejection of benefits, fear of use, and perceived threats. In the sample of older adults who use smartphones, the effect size of the association between perceived usefulness and intention to use is significantly lower than the effect size in the sample of older adults who do not use smartphones. Factors associated with perceived usefulness also differ between the two samples, as the effect size of ease of use is significantly lower, while the effect size of rejection of benefits is significantly higher in the sample of older adults who use smartphones.

Discussion and conclusions: This study provides insights into the factors of smartphone adoption among older adults, including perceived threats while using smartphones. It indicated the need to separately treat older adults who use smartphones and those who do not. This work is partially funded by the Slovenian Research Agency (J5-3111).

Keywords: older adults, smartphones, technology adoption, secure use of smart devices

Uporaba umetne inteligence na področju zdravja delovno aktivnih in starejših odraslih

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Izhodišča in namen: Umetna inteligenca (UI) prinaša številne pozitivne učinke, ki segajo na različna področja človekovega življenja. Razumemo jo lahko kot »strojni sistem«, ki za nabor ciljev, ki jih določi človek, lahko predvidi napovedi, opredeli priporočila ali odločitve v resničnih ali virtualnih okoljih z različnimi stopnjami avtonomije. Premika meje tako v tehnoloških zmogljivostih kot v načinu, kako uporabiti UI, med drugim tudi v zdravstvu. Ključno je, da se UI ne dojema kot nadomestek za človeško delo, ampak kot orodje, ki lahko zaposlenim pomaga doseči ugodnejše rezultate dela, izboljšati stroškovno učinkovitost in razumeti zapletene medicinske in zdravstvene podatke. Implementacija UI v zdravstvene storitve zahteva kritično oceno etičnih in pravnih vidikov njene uporabe. Namen raziskave je prepoznati možnosti in pomen uporabe umetne inteligence na področju zdravja delovno aktivnih in starejših odraslih.

Predstavitev vsebine: Zahteve po izboljšanju in kakovosti zdravstvenih storitev se zvišujejo. Pri doseganju tega cilja so nujne avtomatizirane rešitve; pomembno vlogo pri tem ima umetna inteligenca. Razvoj se osredotoča na gradnjo modelov, ki temeljijo na obsežnih zbirkah podatkov uspešno rešenih zdravstvenih primerov. Predpogoj za uvajanje novih tehnologij je spreminjanje tradicionalnih kliničnih informacijskih sistemov z omejenimi možnostmi analize podatkov. To vključuje digitalizacijo podatkov z različnih ravni zdravstvenega varstva, s katerimi bo omogočen strojno berljiv elektronski zdravstveni karton. Raziskave kažejo, da uporaba UI v zdravstvu postaja vse pogostejša, z aplikacijami, ki segajo od presêjanja in triaže, kliničnega napovedovanja tveganja do zgodnejše in natančnejše diagnoze. S časovno analizo pacientovih zdravstvenih težav, genetike in življenjskega sloga UI lahko priporoči osebni načrt zdravljenja, ki zajema ustrezno jemanje zdravil in kakovostno zdravljenje. UI lahko deluje tudi kot virtualni zdravstveni pomočnik, s katerim lahko pacient pridobiva ustrezne informacije o svoji bolezni in posledično izboljšuje svoje vključevanje v načrt zdravljenja. UI pomaga tudi pri razvoju učinkovitejših zdravil z manj stranskimi učinki. Rabo sodobne informacijske tehnologije definira tudi aplikacija telemedicine. Vključuje zdravstveni posvet, diagnostiko in zdravljenje na daljavo. Prednosti so celostna oskrba pacienta ne glede na kraj bivanja, razpoložljivost pacientovih podatkov za strokovne posvete, možnost daljinskega obveščanja o spremembah zdravstvenega stanja pri kroničnih boleznih. UI lahko poenostavi tudi administrativne naloge v zdravstvenih zavodih. Hitrost in učinkovitost prispeva tudi k zmanjšanju stroškov in skupni finančni koristi zdravstvenega sistema. Prednostne naloge, ki jih je potrebno obravnavati v prihodnosti, vključujejo izobraževanje, raziskovanje in izkoriščanje potencialov na področju umetne inteligence na vseh ravneh študija v zdravstvu in ustvarjanje priložnosti za nadgradnjo znanja. Vodje bi morali graditi organizacijske strukture, ki zaposlenim v zdravstvu omogočijo vključevanje v vse faze umetne inteligence, od razvoja do implementacije.

Sklepne ugotovitve: Razvijanje veščin novih tehnologij v zdravstvu zahteva nova znanja in vzpostavljanje zaupanja do umetne inteligence. Ob dejstvu, da ta tehnologija izboljša delovna mesta in procese, je treba zagotoviti, da ne bo zmanjšana človeškost delovnega okolja in odnos do pacientov različnih generacij.

Ključne besede: zdravstvo, razvoj novih tehnologij, izobraževanje, kakovost življenja

The Use of Artificial Intelligence in the Field of Health for Working-age Adults and Older Adults

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Introduction and purpose: Artificial intelligence (AI) brings numerous positive effects that extend to various aspects of human life. It can be understood as a “machine system” that, for a set of goals defined by humans, can make forecasts, formulate recommendations, or take decisions in real or virtual environments with varying degrees of autonomy. It pushes the boundaries both in technological capabilities and in the manner in which it is used, also in healthcare. It is crucial to perceive AI not as a substitute for human work, but as a tool that can help employees achieve more favorable work outcomes, improve cost-effectiveness, and better understand complex medical data. The implementation of AI in healthcare services requires a critical assessment of the ethical and legal aspects of its use. The purpose of the research is to identify the opportunities and significance of using artificial intelligence in the field of healthcare for working-age adults and older adults.

Content presentation: The demands for improvement and higher quality of healthcare services are increasing. Automated solutions are vital in order to achieve this goal, and artificial intelligence can play a significant role. Development is focused on building models based on extensive databases of successfully solved healthcare cases. A prerequisite for the introduction of new technologies is the transformation of traditional clinical information systems with limited data analysis capabilities. This includes digitalisation of data from various levels of healthcare, enabling a machine-readable electronic health record. Research indicates that the use of AI in healthcare is becoming increasingly common, with applications ranging from screening and triage to clinical risk prediction and faster, more accurate diagnoses. Using time analysis of a patient's health issues, genetics, and lifestyle, AI can recommend a personalized treatment plan, including appropriate medication and high-quality care. AI can also function as a virtual healthcare assistant, providing patients with relevant information about their condition and thereby improving their engagement in their treatment plan. AI can also aid in the development of more effective drugs with fewer side effects. The use of modern information technology is also defined by telemedicine applications, which include remote healthcare consultations, diagnostics, and treatment. Advantages include integrated patient care regardless of their physical location, availability of patient data for expert consultations, and the possibility of remote notification of changes in health status in chronic diseases. AI can also simplify administrative tasks in healthcare institutions, and in this way contribute to speed, efficiency, and cost reduction, resulting in overall financial benefits to the healthcare system. Priorities to be addressed in the future include education, research and exploiting the potential of AI at all levels of study in healthcare, and creating opportunities to build on knowledge. Leaders should build organisational structures that enable healthcare staff to be involved in all phases of AI, from development to implementation.

Conclusions: Developing skills in new technologies in healthcare requires new knowledge and building trust in AI. While this technology improves workplaces and processes, it is important to ensure that the humanity of the work environment and the relationship with patients of different generations is not diminished.

Keywords: healthcare, development of new technologies, education, quality of life

Kako učinkovita je uporaba mobilne aplikacije pri izboljšanju znanja in ozaveščenosti o škodljivosti alkohola?

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Uvod: V večini sodobnih družb so zdravstvena tveganja, povezana z življenjskim slogom, kot so prekomerna telesna teža, raba alkohola in tobaka, stres na delovnem mestu in telesna nedejavnost, postala vseprisotna. Dejavniki tveganja, povezani z življenjskim slogom, slabo vplivajo na počutje in imajo pomembno vlogo pri nastanku številnih kroničnih bolezni. Posledice se kažejo tudi pri delovno aktivni populaciji in sicer kot zmanjšana delovna sposobnost, manjša produktivnost, odsotnost z dela in prezenti- zem. V zadnjih desetletjih je prišlo do hitrega razvoja novih informacijsko komunikacij- skih tehnologij, vključno z mobilnimi aplikacijami, ki odpirajo nove možnosti za zago- tavljanje zdravstvenih informacij in intervencij za spremembo vedenja. Kljub velikemu številu različnih mobilnih aplikacij pa je aplikacij za izboljšanje ozaveščenosti o škodljivi- vosti alkohola razmeroma malo. Namen naše raziskave je bil oceniti, ali je mogoče z mobilno aplikacijo izboljšati znanje in ozaveščenost o tveganjih in škodljivosti alkohola.

Metode: Aplikacija za pametne telefone, imenovana „VešKajJeš“ (VKJ), uporabnikom omogoča skeniranje črtno koda izbranega živila in prejem povratnih informacij o pre- hranskem profilu; za alkoholne pijače zagotavlja informacije o vsebnosti alkohola in ocenjeni energijski vrednosti skupaj z enajstimi zdravstvenimi sporočili/opozorili o tveganjih in škodljivosti alkohola, ki se naključno vrtijo na zaslonu. Da bi ocenili, ali sta se znanje in ozaveščenost uporabnikov aplikacije VKJ o tveganjih in škodljivostih, po- vezanih s pitjem alkoholnih pijač, po izpostavljenosti zdravstvenim sporočilom spre- menila, smo v okviru nadgradnje aplikacije izvedli anketo pred intervencijo in po njej.

Rezultati: Pri osmih od dvanajstih testiranih zdravstvenih opozoril so bile ugotovljene pomembne razlike v znanju in ozaveščenosti o tveganjih in škodljivosti, povezanih s pi- tjem alkoholnih pijač. Izboljšanje je bilo v večji meri opazno v skupini visoko tveganih pivcev. Rezultati so tudi pokazali, da velika večina udeležencev (78 %), ki so bili izpo- stavljeni zdravstvenim sporočilom, podpira obvezno označevanje alkoholnih pijač z in- formacijami o sestavinah in energijski vrednosti, 72 % pa bi jih želelo imeti zdravstvena opozorila na pijačah, ki vsebujejo alkohol.

Razprava in zaključek: Naša študija je pokazala, da lahko zdravstvena opozorila, pred- stavljena v mobilni aplikaciji kot pisna sporočila skupaj s piktogrami, izboljšajo zna- nje in povečajo ozaveščenost o tveganjih in škodljivosti alkohola. Uporabniki aplikaci- je VKJ so imeli po intervenciji bistveno boljše znanje o škodi in tveganjih, povezanih z alkoholom, na šestih področjih, ki obravnavajo vpliv alkohola na pojav nasilja, nesreč in poškodb, vpliv na razvoj možganov ter pojav duševnih težav, rakastih obolenj in od- visnosti od alkohola. Največja razlika v ozaveščenosti je bila ugotovljena pri sporočilu „Alkohol lahko povzroči raka“, ki je bilo med udeleženci študije najmanj poznano tve- ganje. Da pa bi vplivali ne le na znanje, temveč tudi na vedenje, povezano s pitjem, je treba te intervencije podpreti in okrepiti z drugimi politikami, ki vplivajo na rabo al- kohola.

Ključne besede: mobilna aplikacija, alkohol, zdravstvena opozorila, z alkoholom pove- zana škoda, ozaveščenost

How effective a mobile app is in improving knowledge and awareness of alcohol-related harm?

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Introduction: Lifestyle related health risks, such as overweight, use of alcohol and tobacco, work stress, and physical inactivity, have become pervasive in most modern societies. These risk factors have a debilitating impact on the wellbeing of citizens and play a major role in the onset of many chronic diseases. As a result, working life is affected due to impaired work ability, decreased productivity, absenteeism, and presenteeism. In recent decades, there has been a rapid development of new technologies, including specific tools such as mobile apps, which open up new opportunities for delivering health information and behaviour change interventions. However, despite the large number of different mobile apps, apps for improving awareness about alcohol-related harm are relatively scarce. The aim of our research was to assess whether knowledge and awareness of the risks and harms associated with alcohol can be improved with a mobile app.

Methods: A smartphone application called “VešKajJeš” (VKJ) enables users to scan the barcode of a selected food item and receive feedback on its nutritional profile; for alcoholic beverages it provides information on alcoholic content and estimated energy value together with eleven health messages/warnings about the risks and harms of alcohol randomly rotating on the screen. To assess if the knowledge and awareness of users of the VKJ app about the risks and harms associated with drinking alcohol, was changed after exposure to the health messages we conducted the survey before and after the intervention in the context of application upgrade.

Results: Significant differences in knowledge and awareness of the risks and harms associated with drinking alcohol were found for eight of the twelve tested health warnings. The improvement was seen to a greater extent in the group of high-risk drinkers. The results also showed that the vast majority of participants (78%) who were exposed to the health messages supported mandatory labelling of alcoholic beverages with information on ingredient listing and energy value, and 72% would like to have health warnings on alcohol products.

Discussion and conclusions: Our study showed that health warnings presented at mobile app as written messages together with pictograms can improve knowledge and raise awareness of the risks and harms related to alcohol. The users of the VKJ app had a significantly better knowledge of alcohol-related harm and risks after the intervention in six domains considering the impact of alcohol on risk of violence, accidents and injuries, brain development, development of mental health problems, cancer, and alcohol dependence. The highest difference in awareness was found when communicating “Alcohol can cause cancer”, which was the least known risk among the study participants. However, in order to influence not just knowledge, but also drinking behaviour, these interventions need to be supported and reinforced by other policies that influence alcohol consumption.

Keywords: Mobile app, Alcohol, Health warnings, Alcohol-related harm, Awareness

Preventivno delovanje medicinskih sester med delovno aktivnim prebivalstvom

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Uvod: Preventivni pregledi za delovno aktivno prebivalstvo se izvajajo pred zaposlitvijo, občasno kot zdravstveni nadzor v zvezi s posameznimi poklici, ki jih zaposleni opravljajo, in kot splošni zdravstveni pregledi za delavce, ko potekajo organizirane preventivne in zdravstveno vzgojne dejavnosti. Ti pregledi so namenjeni ohranjanju in krepitvi zdravja delavcev. V okviru primarnega zdravstvenega varstva medicinske sestre nudijo podporo delovno aktivnemu prebivalstvu, izvajajo vse preventivne zdravstveno vzgojne dejavnosti, sodelujejo s službami medicine dela ter sodelujejo pri izvajanju preventivnih pregledov za zgodnje odkrivanje poklicnih bolezni in preprečevanje poškodb pri delu. Cilj raziskave je bil predstaviti aktivnosti medicinskih sester pri preventivnih pregledih med delovno aktivnim prebivalstvom.

Metode: Naša študija predstavlja integrativni pregled obstoječih raziskav o krepitvi zdravja in dejavnosti zdravstvene nege pri preventivnih pregledih med delovno aktivnim prebivalstvom. Izvedli smo sistematičen pregled literature, objavljene v zbirkah podatkov, kot so Cochrane, PubMed, Web of Science in Scopus, od leta 2019 do 2024. Analiziranih je bilo skupno 34 od 412 identificiranih objavljenih študij.

Rezultati: Našli smo informacije o teoretičnih osnovah praks krepitve zdravja in izvajanja funkcionalne diagnostike kot dejavnosti zdravstvene nege pri preventivnih pregledih. Medicinska sestra je ključna oseba, ki ima znanja in veščine za samostojno sodelovanje, kot član tima ali s specialisti medicine dela, pri izvajanju funkcionalne diagnostike. Sem spadajo antropometrične meritve delavcev (merjenje višine in teže, določanje indeksa telesne mase), merjenje ravnih glukoze v krvi, funkcionalna diagnostika srčno-žilnega sistema (merjenje pulza in krvnega tlaka, elektrokardiografija), ocene dihalnega sistema (spirometrija, kožno alergotestiranje, izobraževanje delavcev), diagnostiko avdio-vestibularnega aparata (avdiometrija) in oceno vida (testiranje ostrine vida, hitrosti reakcije na temo in svetlobo). Poleg tega so medicinske sestre vključene v izvajanje programov promocije zdravja, namenjenih ohranjanju in izboljšanju zdravja delovno aktivnega prebivalstva, kar jim omogoča krepitev zdravstvenega nadzora tako na delovnem mestu kot v vsakdanjem življenju.

Razprava in zaključki: Raziskave kažejo, da medicinske sestre še vedno nimajo jasno opredeljene vloge pri promociji zdravja delovno aktivnega prebivalstva. Namesto tega njihovo delovanje pri preventivnih pregledih temelji na znanju in zagotavljanju storitev funkcionalne diagnostike za oceno zdravja delavcev. Potrebne so nadaljnje raziskave, da bi ugotovili, kako vključiti dejavnosti promocije zdravja medicinskih sester v storitve, posebej zasnovane za delovno populacijo.

Ključne besede: dejavnost medicinske sestre, preventivni pregledi, delovno aktivna populacija

Preventive activities of nurses among the working population

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Introduction: Preventive examinations for the working population are conducted before employment, periodically as health surveillance related to the specific occupations performed by employees, and as general health check-ups for workers when organized preventive and health education activities take place. These examinations aim to preserve and enhance workers' health. Within primary health care, nurses provide support to the working population, carry out all preventive health education activities, collaborate with occupational health services, and participate in conducting preventive screenings for early detection of occupational diseases and prevention of work-related injuries. The research objective was to present the activities of nurses in preventive examinations among the working population.

Methods: Our study represents an integrative review of existing research studies on health promotion and nursing activities in preventive examinations among the working population. We conducted a systematic review of literature published in databases such as Cochrane, PubMed, Web of Science, and Scopus from 2019 to 2024. A total of 34 out of 412 identified published studies were analyzed.

Results: We found information about the theoretical basis of health promotion practices and the implementation of functional diagnostics as nursing activities in preventive examinations. The nurse is a key person who has the knowledge and skills to independently participate, as a team member or with occupational medicine specialists, in conducting functional diagnostics. These include anthropometric measurements of workers (measuring height and weight, determining body mass index), blood glucose level testing, cardiovascular system functional diagnostics (pulse and blood pressure measurement, electrocardiography), respiratory system assessments (spirometry, skin allergy testing, education of workers with chronic obstructive pulmonary disease), audio-vestibular system diagnostics (audiometry), and vision assessment (visual acuity testing, reaction speed to darkness and light). Additionally, nurses are involved in implementing health promotion programs aimed at preserving and improving the health of the working population, allowing them to enhance health control both in the workplace and in their daily lives.

Discussion and conclusions: According to most research, nurses still do not have a clearly defined role in health promotion for the working population. Instead, their activities during preventive examinations are based on knowledge and providing functional diagnostic services to assess workers' health. Further research is needed to determine how to incorporate nurses' health promotion activities into services specifically designed for the working population

Keywords: nurse's activities, preventive examinations, working population

Digitalizacija zdravstvenega sistema

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Uvod in namen: Tehnološke inovacije so postale sestavni del našega vsakdana, kot so nosljive in informacijske tehnologije, virtualna resničnost in internet so stvari, ki prispevajo k transformaciji poslovanja in delovanja v zdravstvu.

Predstavitev vsebine: Vzdržnost in kakovost delovanja zdravstvenih sistemov sta pomemben pokazatelj splošne kakovosti življenja prebivalcev. Na pacienta osredotočeno zdravstvo zahteva uvajanje novih tehnologij ter visoko stopnjo digitalizacije podatkov in procesov. V tem smislu je nujna digitalizacija zdravstvenih sistemov, kar zahteva zamenjavo obstoječih načinov dela z digitalnimi tehnologijami. Uvajanje sprememb v zdravstvu zahteva aktivno vlogo vodstva v procesu digitalizacije. Obvladovanje sprememb v zdravstvu se pri uveljavljanju procesnega pristopa sooča s številnimi izzivi. Pravilna ocena trenutnega stanja in potreb, ki jih zahteva sprememba procesa, je izjemno pomembna pri odločitvi za uvedbo novih procesov. Za uspešno uvajanje sprememb je potrebno vključiti strokovnjake, izobraževati zdravstveni kader, sprejeti jasne strateške cilje z analizo načrta in aktivnosti. Timsko delo, motivacija zaposlenih in jasna komunikacija so predpogoji za učinkovito upravljanje sprememb in uspeh projekta. Prednosti takšnega pristopa zagotavljajo sistematično spremljanje in obvladovanje sprememb in izzivov, ki jih prinašajo. Namen prispevka je predstaviti, kako lahko digitalizacija zdravstvenega sistema z uporabo naprednih tehnologij igra pomembno vlogo pri zagotavljanju personalizirane zdravstvene oskrbe, ki prispeva k boljšemu upravljanju zdravstvenih virov z boljšimi rezultati zdravljenja. Implementacija digitalnih tehnologij je prepoznana kot prihodnost podpore zdravstvenemu sistemu, katerega cilj je vzdržen in kakovosten zdravstveni sistem, osredotočen na bolnika.

Sklepi: Digitalizacija poti zdravil predstavlja model, ki bi zdravstvenemu sistemu omogočil celovito in pregledno spremljanje porabe zdravil kot najpogostejše medicinske intervencije vseh sodobnih zdravstvenih sistemov na svetu.

Ključne besede: zdravstveni sistem, na bolnika osredotočeno zdravstvo, digitalizacija zdravstva, upravljanje sprememb

Digitalization of the drug way

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Introduction and purpose: Technological innovations have become an integral part of our daily life, such as wearable and information technologies, virtual reality and the Internet are things that contribute to the transformation of business and operations in healthcare.

Content presentation: The sustainability and quality of functioning of health systems are an important indicator of the general quality of life of the population. Patient-centered healthcare requires the introduction of new technologies and a high degree of digitization of data and processes. In this sense, it is necessary to digitize healthcare systems, which requires replacing existing ways of working with digital technologies. Introducing changes in healthcare requires management to take an active role in the digitization process. Management of change in healthcare faces a number of challenges in implementing a process approach. A proper assessment of the current situation and the needs required by the process change is extremely important when making a decision to implement new processes. For the successful introduction of changes, it is necessary to involve experts, educate health personnel, adopt clear strategic goals with an analysis of the plan and activities. Teamwork, staff motivation and clear communication are prerequisites for effective change management and project success. The advantages of such an approach ensure systematic monitoring and management of changes and the challenges they bring. The aim of the paper is to present how digitalization of the health system, with the use of advanced technologies, can play a significant role in providing personalized health care, which contributes to better management of health resources with better treatment outcomes. The implementation of digital technologies is recognized as the future of health system support, which aims to have a sustainable and high-quality patient-centered health system.

Conclusions: Digitization of the drug path represents a model that would enable the health system to fully and transparently monitor the consumption of drugs as the most common medical intervention of all modern health systems in the world.

Keywords: healthcare system, patient-centered healthcare, digitization of healthcare, change management

Vloga naprednih informacijsko-komunikacijskih tehnologij pri obvladovanju množičnih nesreč: preliminarni rezultati mednarodne Delfi študije

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Uvod: Uporaba napredne informacijsko-komunikacijske tehnologije (IKT) pri izboljšanju kriznega upravljanja in odločanja v primeru množičnih nesreč (MN) je razmeroma slabo raziskano področje. Cilj pričujoče študije je identificirati in sistematično predstaviti mnenja slovenskih in tujih strokovnjakov o izzivih in priložnostih uporabe IKT v kriznem upravljanju MN.

Metode: V prispevku so predstavljeni preliminarni rezultati prvega kroga e-Delfi študije, ki je potekal od 10. 2. do 1. 3. 2024. Sodelovalo je 25 mednarodnih strokovnjakov s področja zdravstva in informatike, ki so bili izbrani na podlagi njihovega strokovnega znanja in prispevkov k digitalizaciji kriznega upravljanja. Za zbiranje mnenj smo uporabili vprašalnik odprtega tipa. Podatki so bili sistematično analizirani z uporabo kvalitativne vsebinske analize.

Rezultati: Identificirali smo šest ključnih tem: 1. oceno trenutnega stanja digitalizacije, 2. integracijo digitalnih tehnologij, 3. uporabo tehnologij za usposabljanje, 4. uporabo tehnologij za dokumentiranje in komunikacijo, 5. izzive pri sprejemanju IKT ter 6. smernice za prihodnost. Slovenski strokovnjaki so izrazili zaskrbljenost zaradi omejene uporabe digitalizacije v kriznem upravljanju MN, kljub razpoložljivim rešitvam. Tuji strokovnjaki so poudarili napredek pri uporabi tehnologij, kot sta obogatena resničnost (AR) in GPS sledenje, kar omogoča izboljšano krizno upravljanje in natančnejše usposabljanje. Strokovnjaki so tudi opozorili na zakonodajne omejitve, finančne ovire in odpor do sprememb, ki lahko ovirajo širšo implementacijo sodobnih tehnologij. Predstavljena ugotovitve so osnova za oblikovanje vprašalnika drugega kroga Delfi študije.

Razprava in zaključek: Raziskava zapolnjuje pomembno vrzel v literaturi z analizo mnenj strokovnjakov o vlogi IKT pri obvladovanju MN. Ponuja uvid v širšo implementacijo IKT v MN, s poudarkom na nujnosti nadaljnjih raziskav, ki bi obravnavale ekonomske, tehnične in logistične vidike implementacije teh tehnologij. Strokovnjaki se strinjajo, da ima uvedba IKT velik potencial za izboljšanje učinkovitosti in uspešnosti reševalnih ekip v MCI.

Ključne besede: množične nesreče, Informacijsko in komunikacijske tehnologije, zdravstvo, krizno upravljanje, Delfi študija

The role of advanced information and communication technologies in mass casualty incidents: preliminary results of an international Delphi study

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Introduction: The use of information and communication technology (ICT) in enhancing crisis management and decision-making processes during mass casualty incidents (MCIs) is an unresearched field. The objective of this study was to identify and systematically present the opinions of Slovenian and international experts about the challenges and opportunities associated with the application of ICT in MCI crisis management.

Methods: In the presentation, the results of the first phase of an e-Delphi study conducted between 10 February and 1 March 2024 are presented. In this phase participated 25 international experts in healthcare and informatics, were selected based on their expertise and contributions to the digitalization of MCI crisis management. An open-ended questionnaire was used to collect their opinion. Qualitative content analysis was adopted to systematically analyze the data.

Results: We have identified six key themes: 1. an assessment of the current state of digitalization, 2. the integration of digital technologies, 3. the use of technologies for training, 4. the use of technologies for documentation and communication, 5. challenges to ICT adoption and 6. future directions. Slovenian experts expressed concern about the limited use of digitalization in MN crisis management, despite the availability of software solutions. Foreign experts highlighted the progress in the use of technologies such as Augmented Reality (AR) and GPS tracking, which allow for improved crisis management and more accurate training. Experts also pointed out legal constraints, financial barriers, and resistance to change as potential obstacles to the wider use of modern technologies. These findings form the basis for the design of the questionnaire for the phase 2 Delphi study.

Discussion and conclusions: This study fills an important gap in the literature by analyzing expert consensus on the role of ICT in the management of MCI. It provides actual insight into the wider implementation of ICT in MCI and highlights the need for further research to address the economic, technical, and logistical aspects of implementing these technologies. Experts agree that the introduction of ICT has great potential to improve the efficiency and effectiveness of MCI rescue teams.

Keywords: mass casualty incidents, information and communication technology, healthcare, crisis management, Delphi study

Posterji

Poster presentations

Ustna higiena in uporaba zobnih past s fluoridi pri odraslih v Sloveniji v 2019

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Uvod: Predstavljamo rezultate »Nacionalne raziskave o ustnem zdravju odraslih v Sloveniji leta 2019«, s katero smo prvič na nacionalni ravni ugotavljali raven skrbi za ustno zdravje med odraslimi. Namen raziskave je bil oceniti stanje na področju skrbi za ustno zdravje odraslih in oblikovati priporočila za njegovo promocijo. Podrobneje poročamo o rezultatih in ugotovitvah v povezavi z ustno higieno in uporabo fluoridov.

Metode: Ciljna populacija so bili odrasli, stari med 18 in 74 let. Vzorec, reprezentativen za spol in starost, je zajemal 3.200 odraslih (0,21 % te populacije v Sloveniji). Anketiranje smo izvedli s pomočjo anketnega vprašalnika EGOHID. Podatki so bili uteženi po spolu, starosti in izobrazbi. Interpretacija rezultatov je temeljila na številu in deležih oseb v izbranih kategorijah glede na demografske spremenljivke (spol, starost, izobrazba, bivalno okolje) in druge spremenljivke (pogostost čiščenja zob in podobno). Porazdelitve deležev med različnimi skupinami (po spolu, starosti izobrazbi in bivalnem okolju) smo testirali s testom hi-kvadrat (χ^2) in testom CCP (angl. Column Comparison Proportion test) za primerjavo deležev med različnimi skupinami.

Rezultati: 71 % odraslih si redno (vsaj dvakrat dnevno) čisti zobe, od tega 81 % žensk in 60 % moških (test $\chi^2 = 49,879$, $p < 0,001$; test CCP, $p < 0,001$). Vsaj dvakrat dnevno si čisti zobe le 59 % odraslih z največ osnovnošolsko izobrazbo, 68 % s srednješolsko izobrazbo in 82 % z najmanj višješolsko izobrazbo (test $\chi^2 = 24,965$, $p < 0,001$), vendar le v primerjavi z osebami z najmanj višješolsko izobrazbo (test CCP, $p < 0,001$). V vaškem bivalnem okolju, kjer si redno čisti zobe 62 % odraslih, je opaziti manjši delež v primerjavi z osebami iz mestnega (78 %) ali primestnega okolja (76 %) (test $\chi^2 = 26,466$, $p < 0,001$; test CCP, $p < 0,004$). Večina odraslih pri čiščenju zob uporablja zobno pasto. Med njimi jih 64 % uporablja zobno pasto, ki vsebuje fluoride, 14 % jih uporablja zobno pasto brez fluoridov, 23 % pa jih ne ve, ali njegova zobna pasta vsebuje fluoride. Zobno nitko redno ali občasno uporablja 64 % odraslih, medzobno ščetko redno ali občasno uporablja 52 % odraslih in strgalo za jezik redno ali občasno uporablja 23 % odraslih. Več statističnih značilnosti je prikazanih v celotnem prispevku.

Razprava in zaključki: Čiščenje zob z zobno pasto, ki vsebuje fluoride, vsaj dvakrat dnevno ter enkrat dnevno uporabo medzobne ščetke in/ali zobne nitke ter strgala za jezik se priporočajo kot učinkovit ukrep za preprečevanje bolezni ustnega predela. Krepiti je treba tudi ozaveščanje o pomenu čiščenja zob za ciljne populacije glede na starost, izobrazbo, bivalno okolje. Ugotovitve in priporočila za izboljšanje ustnega zdravja predstavljajo korak k zmanjšanju bremena bolezni ustnega predela ter stroškov v sistemu (zobo)zdravstvenega varstva.

Gljučne besede: ustno zdravje, odrasli, ustna higiena, fluoridi

Oral hygiene and the use of fluoride toothpastes in adults in Slovenia in 2019

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Introduction: We present the results of the »National Oral Health Survey of Adults in Slovenia in 2019«, which for the first time determined the level of oral health care in adults at the national level. The aim of our study was to assess the state of oral health in adults and make recommendations for its promotion. We report in detail the results and findings in relation to oral hygiene and fluoride use.

Methods: The target population was adults aged 18–74 years. The gender- and age-representative sample comprised 3,200 adults (0.21% of the population in Slovenia). The survey was conducted using the EGOHID questionnaire. The data were weighted by gender, age and education. The results were analysed based on the number and proportion of people in the selected categories according to demographic variables (gender, age, education, living environment) and other variables (frequency of dental cleaning, etc.). The distribution of proportions between different groups (by gender, age, education and living environment) were tested using the chi-square (χ^2) test and the CCP test to compare proportions between different groups.

Results: 71% of adults brushed their teeth regularly (at least twice a day), of which 81% were women and 60% men (χ^2 test=49.879, $p<0.001$; CCP test, $p<0.001$). Only 59% of adults with at least primary education, 68% of adults with secondary education and 82% of adults with at least tertiary education brushed their teeth at least twice a day (χ^2 test=24.965, $p<0.001$), but only compared to adults with at least tertiary education (CCP test, $p<0.001$). In rural areas, where 62% of adults regularly brushed their teeth, the proportion was lower than among adults in urban (78%) or suburban areas (76%) (χ^2 test=26.466, $p<0.001$; CCP test, $p<0.004$). Most adults used toothpaste when brushing their teeth. Of these, 64% used toothpaste with fluoride, 14% used toothpaste without fluoride and 23% did not know whether their toothpaste contained fluoride. Dental floss was used regularly or occasionally by 64% of adults, an interdental brush was used regularly or occasionally by 52% of adults, and a tongue scraper was used regularly or occasionally by 23% of adults. Further statistical data are included in the paper.

Discussion and conclusions: Brushing teeth at least twice daily with fluoride toothpaste and interdental brushing and/or flossing and tongue scraping once daily are recommended as effective measures to prevent oral disease. There is also a need to raise awareness of the importance of dental hygiene among the target population in terms of age, education and living environment. The results and recommendations for improving oral health are a step towards reducing the burden of oral diseases and costs in the (dental) healthcare system.

Keywords: oral health, adults, oral hygiene, fluorides

Prehranjevalne navade v terapevtski komuni

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Uvod: Terapevtsko komuno Skupnost Srečanje je ustanovil duhovnik italijanskega rodu, Pierino Gelmini, ki jo je leta 1994 odprl v Novi Gorici. Odvisniki od prepovedanih substanc se soočajo s problemom uživanja hrane, saj lahko kronična uporaba substanc vodi do beljakovinsko-energijske podhranjenosti, pomanjkanja vitaminov, izčrpanosti in zmanjšanja mišične mase. Ob abstinenci je lahko uživanje hrane zelo zahtevno, saj je povezano z negativnimi čustvi in tesnobo. V hrani iščejo tolažilni odziv, kar lahko vodi v povečanje telesne mase. Pomembno je ozaveščanje o pomenu zdrave prehrane in spodbujanje zdravih prehranjevalnih navad za hitrejše okrevanje v terapevtski komuni.

Metode: Z metodo opazovanja smo ocenili prehranjevalne navade udeležencev terapevtske komune Skupnost Srečanje, katerim smo opravili tudi meritev sestave telesa z bioelektričnim impedančnim analizatorjem. Izmerili smo jim telesno maso, odstotek tekočine v telesu, mišično maso, skupno in visceralno maščobo, ter metabolno starost. Analizirali smo naključni ponujeni tedenski jedilnik in ugotavljali prehranski vnos udeležencev ter ocenili njihovo prehrano z računalniškim programom OPKP. V raziskavi je sodelovalo sedem udeležencev moškega spola, starih med 21 in 34 let.

Rezultati: Po pridobljenih antropometričnih meritvah smo ugotovili, da udeleženci glede na indeks telesne mase, ki je znašal 26,5 kg/m² spadajo v kategorijo čezmerno hranjenih. Vendar pa sta parametra deleža maščobe (19,43 %) in visceralne maščobe (4,79) bila v priporočenem obsegu, mišična masa pa višja od priporočene (65,5 kg; priporočeno 45,1–52,9 kg), zato smo zaključili, da so udeleženci normalno hranjeni. Režim prehranjevanja v terapevtski komuni je točno določen po sestavljenem urniku. Trije glavni obroki si sledijo na pet do sedem ur, kar pa glede na priporočila ni ravno ugodno, še posebej ker so ti obroki energijsko obilni. Čeprav udeleženci zaužijejo le tri obroke dnevno v večini dosegajo svoje dnevne energijske potrebe, ki znašajo 13.027,4 kJ (3.101,8 kcal) v primerjavi s priporočenimi 13.770,3 kJ (3.278,6 kcal); prav tako pa so skladni s smernicami tudi energijski deleži hranil (15 % beljakovin, 25 % maščob in 54 % ogljikovih hidratov ter 9 % enostavnih sladkorjev in 7 % nasičenih maščobnih kislin). Zaskrbljujoče so predvsem vrednosti natrija, ki so bile presežene za več kot dvakratno vrednost priporočenega vnosa (zaužito 5.286 mg, priporočilo 2.000 mg). To vrednost gre pripisati predvsem velikim količinam kruha in suhomesnatih izdelkov, ki jih udeleženci vsakodnevno zaužijejo. Glede na velike količine zaužitega polnozrnatega kruha, pa ugotavljamo tudi višjo vsebnost zaužitih prehranskih vlaknin (37,9 g) v primerjavi s priporočili (30 g).

Razprava in zaključki: Udeleženci terapevtske komune se poskušajo približati zdravemu življenjskemu slogu, a vendar jim ostaja še veliko prostora za izboljšave. Pomembno je, da slabe prehranjevalne navade prepoznajo in jih poskušajo spremeniti ter to znanje prenesti v življenje po terapevtski komuni.

Ključne besede: prehranjevalne navade, režim prehrane, pomen zdrave prehrane, prehrana v terapevtski komuni

Eating habits in therapeutic community

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Introduction: The therapeutic community Skupnost Srečanje was founded by the Italian priest Pierino Gelmini, who opened it in Nova Gorica in 1994. Addicts of illicit substances face a problem with food intake, as chronic substance use can lead to protein-energy malnutrition, vitamin deficiencies, exhaustion, and reduced muscle mass. During abstinence, food consumption can be challenging due to negative emotions and anxiety. Individuals often seek comfort in food, which can lead to weight gain. It is important to raise awareness about the importance of healthy eating and promote healthy eating habits for faster recovery in the therapeutic community.

Methods: Using observational methods, we evaluated the dietary habits of participants in the therapeutic community Skupnost Srečanje, and conducted body composition measurements using a bioelectrical impedance analyser. We measured their body weight, body fluid percentage, muscle mass, total and visceral fat, and metabolic age. We analysed a randomly offered weekly menu and assessed participants' dietary intake using the OPKP computer program. The study involved seven male participants aged between 21 and 34 years.

Results: Based on anthropometric measurements, we found that participants, with a body mass index of 26.5 kg/m², fell into the overweight category. However, fat percentage (19.43%) and visceral fat (4.79) were within recommended ranges, as muscle mass was higher than recommended (65.5 kg; recommended 45.1–52.9 kg), indicating that participants were adequately nourished. The dietary regime in the therapeutic community follows a precise schedule, with three main meals spaced every five to seven hours. Although participants consume only three meals daily, they mostly meet their daily energy requirements of 13,027.4 kJ (3,101.8 kcal), compared to the recommended 13,770.3 kJ (3,278.6 kcal). Furthermore, they comply with nutritional guidelines for energy proportions (15% protein, 25% fat, and 54% carbohydrates, with 9% simple sugars and 7% saturated fatty acids). The sodium values were particularly concerning, exceeding recommended intake by more than twice (consumed 5,286 mg, recommended 2,000 mg). This can be attributed to the high consumption of bread and processed meat products. Additionally, due to the high intake of whole grain bread, participants also consumed higher levels of dietary fibre (37.9 g) compared to recommendations (30 g).

Discussion and Conclusion: Participants in the therapeutic community strive to adopt a healthy lifestyle, but there is still room for improvement. It is important for them to recognize and try to change unhealthy eating habits and to transfer this knowledge into their lives after the therapeutic community.

Keywords: eating habits, dietary regime, healthy food promotion, nutrition in therapeutic community

Regionalni poslovni zajtrk kot priložnost za vključitev v delovno aktivne odrasle

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Izhodišča in namen: Na Šolskem centru Šentjur, Višji strokovni šoli skrbimo za zagotavljanje kakovosti na področju vzgojno izobraževalnega dela in s tem karierni razvoj študentov. Izvedba Regionalnega poslovnega zajtrka je eden izmed tovrstnih dogodkov, katerega cilji so: povezovanje predstavnikov podjetij in višjih strokovnih šol z namenom še bolj kakovostne izvedbe praktičnega izobraževanja in možnosti zaposlitve, povezovanja delodajalcev s študenti, predstavitev pričakovanja/želja delodajalcev ter študentov, izmenjava mnenj med delodajalci in šolo ter študenti.

Predstavitev vsebine: Regionalnega poslovnega zajtrka se je udeležilo 24 predstavnikov podjetij ter predstavniki Skupnost višjih strokovnih šol in predstavnica Občine Šentjur. Predstavili so se vsi delodajalci do katerih so lahko študentje pristopili ter si od njih pridobili podatke, ki so jih zanimali. Na zajtrk z delodajalci so bili povabljeni študenti naših višješolskih študijskih programov Gostinstvo in turizem, Naravovarstvo, Upravljanje podeželja in krajine, Živilstvo in prehrana. Srečanje smo organizirali z namenom povezovanja delodajalcev s študenti, ki jih lahko skozi praktično izobraževanje spoznajo in sooblikujejo v bodoče sodelavce. Vsa sodelujoča podjetja so imela na razpolago mize za pogovor in predstavitvene materiale. Ves čas je bil na razpolago zajtrk ob katerem je potekalo neformalno druženje in izmenjava mnenj. Po zaključku dogodka smo prosili vse udeležence, da so izpolnili anketo z namenom pridobitev povratnih informacij. Delodajalci so bili zelo zadovoljni z možnostjo predstavitve njihovega podjetja, študenti pa s spoznavanjem podjetij. Po zaključku dogodka smo povzeli smernice za delo v prihodnje. Višja šola omogoča in spodbuja aktivno in ustvarjalno vključevanje študentov v študijski proces in s tem tudi v praktično izobraževanje. S tem krepiamo njihovo vlogo pri prevzemanju odgovornosti za študijski uspeh in uspešnost študija. Skrb za zaposljivost diplomantov je eden izmed naših ciljev, zato je velik poudarek na organizaciji in izvedbi praktičnega izobraževanja študentov. Višja strokovna šola si prizadeva povezovati študij s prakso in nuditi študentom konkretna znanja in veščine, ki jih bodo potrebovali.

Sklepne ugotovitve: Študente vzpodbujamo k sodelovanju z gospodarstveniki ter vključevanje v projekte, ki so organizirani na ravni regije in države. Dogodki, ki omogočajo povezovanje delodajalcev in lokalnega okolja s študenti so del kariernega razvoja študentov in s tem vključevanja v delovno aktivne odrasle. Delodajalci in študenti si želijo več tovrstnih dogodkov.

Ključne besede: delodajalci, sodelovanje z okoljem, trg dela

Regional Business Breakfast as an opportunity to include in to working adults

Natalija Brečko

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Introduction and purpose: School Centre Šentjur, Higher vocational school is committed to quality assurance in the field of educational work and the career development of students. Regional Business Breakfast is one of such events and their aims are: to bring together representatives of companies and higher vocational schools in order to improve the quality of practical education and job opportunities, to connect employers with students, to present the expectations/desires of employers and students, and to exchange views between employers and schools and students.

Content presentation: the Regional Business Breakfast was attended by 24 company representatives, as well as representatives of the Community of Vocational Colleges and the Municipality of Šentjur. All employers were introduced so that the students could approach to them to get information they were interested in. Students of our higher education programmes Hospitality and Tourism, Nature Conservation, Rural and Landscape Management, Food and Nutrition were invited to a breakfast with employers. The meeting was organised with the aim of connecting employers with students, who can get to know them through practical training and shape them into future employees. All participating companies had tables for discussion and presentation materials, and breakfast was available throughout the day for informal socialising and exchanging views. After the event, we asked all participants to fill in a survey that we can get feedback. Employers were very pleased with the opportunity to present their company and students were very satisfied with the opportunity to get to know the companies. After the event we summarised the guidelines for future work. Higher vocational school encourages the active and creative involvement of students in the study process and also in practical training. In doing so, we empower them to take responsibility for their study and their success. The employability of graduates is one of our objectives, and therefore a strong focus is placed on the organisation of practical training for students. Higher vocational school is trying to connect study with practice and to provide students with the concrete knowledge and skills they will need.

Conclusions: students are encouraged to collaborate with companies and to get involved in projects organised at regional and national level. Events that connect employers and the local environment with students are part of students' career development and their integration into working adults. Employers and students wish more events of this kind.

Keywords: employers, cooperation with the environment, labour market

Pomen ocene starostne krhkosti

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Izhodišča in namen: Za oblikovalce zdravstvene in socialne politike postaja staranje prebivalstva prednostna tema. Pomembno je, kako zadovoljiti potrebe starejših pri zadovoljevanju osebnih primarnih potreb in lastnega dobrega počutja ter kako aktivno prispevati družini ali skupnosti v starosti. Zaradi demografskega staranja so pomembne javnozdravstvene prioritete, kot so: razvoj storitev, raziskovanje specifičnih problemov in težav starejših, vrednotenje potreb starejših z namenom izboljšanja preprečevanja, prepoznavanja in obravnave le-teh. Eno od zapletenih kliničnih stanj, povezanih s staranjem, je krhkost. Za krhkost je značilno zmanjšanje fizioloških sposobnosti v več organskih sistemih, kar ima za posledico večjo dovzetnost za nastanek poškodb. Krhkost je mogoče delno preprečiti in zdraviti z vadbo, ustrezno prehrano in zmanjšanjem polipragmazije.

Predstavitev vsebine: Epidemiološke študije kažejo na povezavo med krhkostjo in negativnimi zdravstvenimi posledicami. Obstoječi odziv zdravstvenega varstva na krhkost v glavnem temelji na sekundarni oskrbi in se odziva na akutne zdravstvene težave, kot so padci, delirij ali nepokretnost, zato je potreben bolj proaktiven in celovit odziv tako na osebo kot na skupnost. Krhkost je stanje upada notranje sposobnosti, preden se pojavi invalidnost. Krhkost razdelimo na tri faze. Prva se imenuje zgodnja faza, kjer simptomi neposredno kažejo na omejitve telesa, za drugo srednjo fazo so značilni simptomi, ki kažejo na omejitve posameznih funkcionalnih sposobnosti in poslabšanje splošne kakovosti življenja, pozno fazo (komplikacije krhkosti) pa diagnosticiramo, ko je individualna funkcionalna samopodoba znatno zmanjšana, medtem ko lahko sočasna vedenjska paradigma potencialno povzroči smrt. Ker je krhkost stanje hitrega biološkega staranja, v katerem telo postopoma izgublja sposobnost prilagajanja fizičnemu, duševnemu in socialnemu stresu, za katerega so značilni splošna šibkost, utrujenost in nizka telesna aktivnost, zmanjšana vzdržljivost, slabo ravnotežje, hujšanje ali izguba apetita, oslabiljena sposobnost reševanja problemov in spomin, je izjemno pomembno, da te biološke spremembe pravočasno prepoznamo. Prav implementacija in uporaba orodij za prepoznavanje krhkosti bi bistveno prispevala k izbiri različnih možnosti za prilagojeno zdravljenje in ugotavljanje tveganja, prihranku časa in izboljšanju kakovosti življenja starejših odraslih ter izogibanju negativnim zdravstvenim posledicam. Pomembno je tudi omeniti, da odkrivanje starejših odraslih, pri katerih se krhkost še ni razvila, omogoča načrtovanje posegov za preprečevanje ali odložitev krhkosti v poznejši starosti. V prispevku bodo predstavljeni osnovni pojmi v zvezi s krhkostjo, orodja za merjenje krhkosti in interpretacija orodij v zdravstvene in socialne dejavnosti z namenom dodajanja vrednosti pri vrednotenju celovite oskrbe starejše populacije.

Sklepne ugotovitve: Celovita geriatrična interdisciplinarna ocena nudi boljšo prognozo in možnosti za prilagojeno zdravljenje in določanje tveganja. Nujno je, da se v klinično prakso uvedejo učinkovita orodja, začevši z vrednotenjem, identifikacijo primerov in pravočasnim zdravljenjem tega pomembnega sindroma krhkosti.

Ključne besede: krhkost, starejši odrasli, ocena

Significance of the assessment of geriatric gerastenia

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Introduction and purpose: For health and social policymakers, population ageing becomes a priority issue. Those questions concern, first, how to meet the needs of the elderly in meeting personal primary needs and their own well-being and secondly, how to actively contribute to the family or community in old age. Due to demographic ageing important public health priorities such as: development of services, research into specific problems and difficulties of the elderly, evaluation of the needs of the elderly for the purpose of improving the prevention, recognition and treatment thereof. One of complex clinical conditions associated with aging is fragility (frailty) or gerastenia. Gerastenia is characterised by a decline in physiological ability in several organic systems, resulting in increased susceptibility to stressors. Fragility can be partly prevented and treated by exercise, adequate diet and reduction of polypharmacia.

Content presentation: Epidemiological studies show a correlation between gerastenia and harmful health outcomes. The existing healthcare response to gerastenia is mainly based on secondary care and responds to acute health problems such as falls, delirium or immobility, therefore a more proactive and integrated response to both the person and the community is needed. Gerastenia is a state of decline in intrinsic ability before disability occurs during life. Gerastenia can be divided into three stages depending on weight. The first is called the early phase (pre-frail) where symptoms directly indicate the limitations of the body, although an early response would ensure a successful response to this challenge. The second middle phase (frailty) is characterised by characteristic symptoms indicating limitations in individual functional ability and worsening overall quality of life. A late phase (frailty complications) is diagnosed when individual functional self-esteem is significantly reduced, while concomitant behavioural paradigm can potentially lead to death. Since gerastenia is a state of rapid biological aging in which the body gradually loses the ability to adapt to physical, mental and social stress, characterized by general weakness, fatigue and low physical activity, impaired endurance, poor balance, weight loss or loss of appetite, impaired ability to solve problems and memory, it is of utmost importance to recognise these biological changes in time. It is precisely the implementation and application of gerastenia recognition tools that would significantly contribute to the choice of different options for adjusted treatment and risk determination, time savings and improving the quality of life of older people as well as avoiding negative health outcomes. Because individualized interventions preserve the independence, physical function and cognition of the individual. It is also important to note that the identification of older people who have not developed gerastenia provides the possibility of planning interventions to prevent or delay gerastenia at a later age. In practical terms, it is necessary to implement a system of evaluation and evaluation of gerastenia in elderly people primarily in primary health care offices. The presentation of the paper will present basic terms related to gerastenia, tools for measuring gerastenia and interpretation of tools into health and social activities with the aim of adding value in the evaluation of comprehensive care of older population.

Conclusions: A comprehensive geriatric interdisciplinary evaluation offers better prognosis and possibilities for tailored treatment and risk determination. It is imperative that effective tools be introduced into clinical practice starting with the evaluation, identification of cases and timely treatment of this important geriatric syndrome.

Keywords: Gerastenia, elderly people, assessment

Napovedniki stresa pri zaposlenih v zdravstveni negi

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Uvod: V primerjavi z drugimi poklici se zaposleni v zdravstvu soočajo s številnimi delovnimi obremenitvami in čustveno zahtevnimi situacijami, kar lahko vodi do slabšega blagostanja in težav v duševnem zdravju, kot so povečan stres, anksioznost, depresivnost in izgorelost. Duševno zdravje zaposlenih v zdravstveni negi je ključnega pomena pri zagotavljanju njihove delovne uspešnosti, zadovoljstva z delom in kakovosti oskrbe pacientov. Namen raziskave je bil preučiti zaznani stres med zaposlenimi v zdravstveni negi ter vlogo psihološkega blagostanja, socialne opore in ocene lastnega zdravstvenega stanja pri napovedovanju stresa.

Metode: V raziskavi je sodelovalo 122 zaposlenih v zdravstveni negi, starih od 20 do 39 let, večinoma ženskega spola (75 %), ki so izpolnili Lestvico zaznanega stresa (PSS), Indeks blagostanja (WHO-5), Vprašalnik zaznane socialne opore (F-SozU) in samooceno zdravja (SRH). Zbrani so bili tudi sociodemografski podatki udeležencev.

Rezultati: Ženske so doživljale več stresa v primerjavi z moškimi ($t = -2,08$, $p < 0,001$), medtem ko sta bila starost ($r = -0,25$, $p = 0,006$) in ekonomski status ($r = -0,26$, $p = 0,005$) negativno povezana z zaznano stopnjo stresa. Nadalje je bil zaznani stres negativno (nizko do zmerno) povezan s psihološkim blagostanjem ($r = -0,59$, $p < 0,001$), socialno oporo ($r = -0,36$, $p < 0,001$) in samooceno zdravstvenega stanja ($r = -0,42$, $p < 0,001$). Med vsemi napovedniki, vključenimi v regresijski model, so nižja starost, slabše blagostanje in slabša socialna opora pomembno napovedovali višjo stopnjo stresa med zaposlenimi ($R^2 = 0,47$; $F(7, 114) = 17,28$; $p < 0,001$).

Razprava in zaključki: Rezultati kažejo, da imata skrb za dobro psihološko počutje in krepitev kakovostnih socialnih odnosov lahko pomembno varovalno funkcijo pri preprečevanju prekomernega stresa med zaposlenimi v zdravstveni negi. Usposabljanje s področja spoprijemanja s stresom mora predstavljati neobhodno sestavino v izobraževanju zdravstvenih delavcev. Predvsem pa se zdi pomembno, da znajo uravnovežiti skrb za paciente s praksami skrbi zase (kot so čuječnost, rezilientnost in konstruktivno spoprijemanje).

Ključne besede: stres na delovnem mestu, duševno zdravje, socialna opora, zdravstvena nega

Predictive factors affecting stress among nurses

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Introduction: Compared to other professions, healthcare workers usually face high workloads and emotionally challenging situations which can result in poorer well-being and mental health problems such as increased stress, anxiety, depression, and burn-out. Nurses' mental health is crucial due to its relevance to job satisfaction, job performance, and the quality of patient care. The purpose of this study was to examine perceived stress among nursing professionals and, more specifically, the role of psychological well-being, social support, and self-rated health in predicting nurses' stress.

Methods: Participants were 122 nurses, aged 20–39 years, and predominantly female (75%). They completed the Perceived Stress Scale (PSS), the World Health Organization Well-Being Index (WHO-5), the Perceived Social Support Questionnaire (F-SozU), and the Self-Rated Health (SRH) measure. In addition, sociodemographic data of participants was also collected.

Results: Female employees experienced greater stress than men ($t = -2.08, p < 0.001$), while the employees' age ($r = -0.25, p = 0.006$) and economic status ($r = -0.26, p = 0.005$) were negatively related to the perceived stress level. Moreover, stress was negatively (low to moderately) correlated with psychological well-being ($r = -0.59, p < 0.001$), social support ($r = -0.36, p < 0.001$), and self-rated health ($r = -0.42, p < 0.001$). Among all the predictors included in the regression model, lower age, poorer psychological well-being, and lower social support significantly predicted higher stress among employees ($R^2 = 0.47; F(7, 114) = 17.28; p < 0.001$).

Discussion and conclusions: The results suggest that taking care of well-being and promoting quality social relationships may have an important protective function in preventing stress among nurses. Stress prevention training should be an essential component of nursing education, and should include learning about balancing care for patients with self-care practices (such as mindfulness, resilience, and constructive coping strategies).

Keywords: occupational stress, mental health, social support, healthcare

Trend števila namernih predoziranj s smrtnim izidom v letih 2019 do 2022 v Sloveniji

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Izhodišča in namen: Število smrtnih primerov, povezanih z drogami, je v Sloveniji visoko (44 primerov na milijon prebivalcev v starosti med 15 in 64 let) in je vztrajno naraščalo do leta 2020. Število samomorov, povezanih z drogami, je padlo s 23 primerov v letu 2019 na tri (3) primere v letu 2020, nato pa je ponovno začelo naraščati v letih 2021 in 2022. Najpogosteje vpletene snovi so prepovedani opiodi, kokain, zdravila (zlasti benzodiazepini, antidepresivi, opiodni analgetiki na recept) in alkohol. Namen raziskave je ugotoviti, katera so najpogostejše droge, zdravila in kombinacije drog, ki so jih uporabljajo osebe, ki so storile samomor, v letih 2019–2022. Študija primera se izvaja na 50 ljudeh, katerih smrti so bile šifrirane z X61–X62 kot Zunanji vzroki obolevnosti in umrljivosti po MKB -10 iz nacionalne baze podatkov umrlih. Za vsak primer bodo pregledane in analizirane tudi forenzične obdukcije in toksikološke analize ter vključenost v zdravljenje odvisnosti od drog.

Predstavitev vsebine: Predstavili bomo podatke o smrtih, povezanih z drogami, kjer je bil namen samomor (sociodemografski podatki, podatki o alkoholu ter glavnih in povezanih drogah). Kjer je mogoče, bomo preverili dejavnike, povezane s poskusi samomora: zdravljenje odvisnosti, ženski spol, nižja starost, nižja izobrazba, uporaba več drog, uporaba benzodiazepinov, nedavni prevelik odmerek heroina, huda depresija. Od leta 2015 do leta 2021 se je število smrtnih primerov v starostni skupini starejših od 45 let zaradi predoziranja povečalo za 50 %. Kaže se torej trend staranja med tveganimi uporabniki drog, vendar predvsem zaradi povečanega števila smrtnih primerov med ženskami, ki zlorabljajo zdravila in predpisane opioide za lajšanje bolečin. V zadnjih treh letih so bili pri umrlih ženskah sintetični opiodi, oz. opiodni analgetiki prisotni pri polovici predoziranj.

Sklepne ugotovitve: S to raziskavo smo pridobili pomembno informacijo za razumevanje glavnih dejavnikov tveganja v Sloveniji, ki lahko služijo za načrtovanje preventivnih ukrepov. To vključuje dopolnitev smernic za predpisovanje analgetikov na osnovi opiodov, uvedbo programa presejanja bolnikov s tveganjem za predoziranje, ter vzpostavitve posebnih programov in strategij za zmanjšanje tveganja samomora pri tej populaciji, kot so varne sobe, program nalokson za domov, zmanjševanje stigme. Prispevalo bo tudi k boljšemu razumevanju tega problema v mednarodnem kontekstu.

Gljučne besede: prepovedane droge, samomor, dejavniki tveganja

Trend in the number of intentional overdoses with a fatal outcome in the years 2019 to 2022 in Slovenia

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Background and purpose: The number of drug-related deaths is high in Slovenia (44 cases per million inhabitants between the ages of 15 and 64) and steadily increased until 2020. The number of drug-related suicides fell from 23 cases in 2019 to three (3) cases in 2020, and then started to rise again in 2021 and 2022. The most commonly involved substances are illicit opioids, cocaine, medications (especially benzodiazepines, antidepressants, prescription opioid analgesics) and alcohol. The aim of the research is to find out which are the most common drugs, medicines and drug combinations used by people who commit suicide in 2019-2022. A case study is conducted on 50 people whose deaths were coded X61–X62 as External causes of morbidity and mortality according to ICD -10 from the National Death Database. For each case, forensic autopsies and toxicology analyzes and involvement in drug addiction treatment will also be reviewed and analyzed.

Content presentation: We will present data on drug-related deaths where suicide was the intention (socio-demographic data, data on alcohol and main and related drugs). Where possible, we will examine factors associated with suicide attempts: addiction treatment, female sex, younger age, lower education, polydrug use, benzodiazepine use, recent heroin overdose, major depression. From 2015 to 2021, the number of overdose deaths in the over-45 age group increased by 50%. So, there is an aging trend among high-risk drug users, but mainly because of the increased number of deaths among women who abuse drugs and prescription opioids for pain relief. In the last three years, synthetic opioids, or opioid analgesics, were present in half of the overdose cases among deceased women.

Conclusions: Through this research, we obtained important information for understanding the main risk factors in Slovenia, which will be used to plan preventive measures. This includes revision of guidelines for prescribing opioid-based analgesics, establishing programmes for screening the patients at risk for overdose, and implementing specific programs and strategies to reduce the risk of suicide in this population, such as drug consumption rooms, take-home naloxone programmes, stigma reduction. It will also contribute to a better understanding of this problem in an international context.

Keywords: illicit drugs, suicide, risk factors

Čuječnost, psihološko blagostanje in z zdravjem povezan vedenjski slog vzgojiteljic predšolskih otrok

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Uvod: Vzgojitelji predšolskih otrok so zaradi odgovornega in zahtevnega dela izpostavljeni različnim stresnim situacijam. Številni raziskovalni izsledki izpostavljajo pomen čuječnosti pri učinkovitem spoprijemanju, preprečevanju poklicne izgorelosti in izboljšanju blagostanja. Primanjkuje pa študij, ki bi preučevale vedenjski slog pedagoških delavcev, ki je prav tako pomemben varovalni dejavnik zdravja. Namen raziskave je bil tako preučiti odnos med čuječnostjo, z zdravjem povezanimi vedenji in psihološkim blagostanjem pri vzgojiteljicah predšolskih otrok.

Metode: V raziskavi je sodelovalo 113 vzgojiteljic predšolskih otrok v vrtcih Goriške in Obalno-kraške regije. Čuječnost smo preverjali z Lestvico čuječe pozornosti in zavedanja MAAS, psihološko blagostanje z vprašalnikom WHO-5, z zdravjem povezana vedenja pa s posebej oblikovanim vprašalnikom po zgledu CINDI raziskav, ki sistematično spremljajo z zdravjem povezan vedenjski slog prebivalcev Slovenije.

Rezultati: Vzgojiteljice večinoma dobro ocenjujejo svoje zdravstveno stanje, vendar so v primerjavi s splošnim slovenskim aktivnim prebivalstvom nekoliko pogosteje odsotne z dela zaradi bolezni. Podatki o indeksu telesne mase kažejo, da se približno 30% vzgojiteljic uvršča v skupino čezmerne hranjenosti. Prav tako obstajajo velika razhajanja med vzgojiteljicami v količini telesne aktivnosti, pri čemer 52% ne dosega priporočil o zadostni tedenski aktivnosti. Rezultati prehranjevalnih navad so razmeroma ugodni, razen v primeru uživanja sadja in zelenjave ter rib, ko skoraj polovica ne dosega obstoječih smernic zdravega prehranjevanja. Podatki o kajenju so spodbudni, saj velika večina vzgojiteljic (82%) ne kadi. Na področju spalnih navad ugotavljamo, da jih največ ocenjuje kakovost svojega spanja kot srednje (36%) ali dobro (31%). Čeprav v povprečju spijo sedem ur na noč, 31% vzgojiteljic ne dosega priporočil o zadostni dolžini spanja. Korelacijske analize kažejo, da se čuječnost pozitivno povezuje s samooceno zdravja ($r = 0,50$; $p < 0,001$) in telesne pripravljenosti ($r = 0,35$; $p < 0,001$), z drugimi vidiki vedenjskega sloga pomembnih korelacij nismo ugotovili. Višja raven čuječnosti se pomembno povezuje višjim psihološkim blagostanjem ($r = 0,53$; $p < 0,001$). Slednje pa pozitivno korelira s samooceno zdravja ($r = 0,51$; $p < 0,001$) in kakovostjo spanja ($r = 0,39$; $p < 0,001$).

Razprava in zaključki: Ugotovitve raziskave lahko služijo kot izhodišče za spodbujanje bolj zdravih vedenjskih vzorcev in s tem zagotavljanje dobrega počutja in zadovoljstva zaposlenih v predšolski vzgoji. Izsledki nakazujejo na potencialne koristi prakticiranja čuječnosti kot psihološkega vira, ki prispeva k posameznikovemu blagostanju in h kakovosti življenja. Nadaljnje raziskovanje obravnavanih vsebin se zdi posebej pomembno za ohranjanje in krepitev zdravja vseh tistih, ki so vpeti v skrb za vzgojo in razvoj otrok.

Ključne besede: čuječnost, psihološko blagostanje, z zdravjem povezana vedenja, predšolska vzgoja

Mindfulness, psychological well-being and health-related behavioural styles of preschool teachers

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Introduction: Preschool teachers are exposed to a variety of stressful situations due to high responsibilities and work demands. Many studies highlight the effects of mindfulness on coping with stress and burnout prevention as well as improving well-being. However, there is a lack of studies investigating health behaviors of educators. The objective of the study was to examine the relationship between mindfulness, health-related behaviors, and psychological well-being in preschool teachers.

Methods: One hundred and thirteen preschool teachers from kindergartens in the Goriška and Coastal Karst regions participated in the study. Mindfulness was measured with the Mindful Attention Awareness Scale (MAAS), psychological well-being was measured with the WHO-5 questionnaire, and health-related behaviors were measured with a specifically designed questionnaire based on the CINDI surveys, which systematically monitor health-related behaviors in the Slovenian population.

Results: Participants mostly rate their health as good, but reported being absent from work due to illness more often compared to the general working population. According to BMI data, approximately 30% of participants can be classified as overweight. Concerning physical activity, 52% do not meet the recommendations for sufficient weekly exercise. The results on eating habits are quite satisfactory, although, for some foods such as fruit, vegetables, and fish, almost half of the participants do not meet the current guidelines. The data on smoking are encouraging, with the vast majority (82%) of preschool teachers being non-smokers. Regarding sleeping habits, most rate the quality of their sleep as medium (36%) or good (31%). Although the average sleep duration is around seven hours, 31% of preschool teachers do not meet the recommendations for sufficient sleep. Correlation analyses show that mindfulness is positively associated with self-rated health ($r = 0.50$; $p < 0.001$) and perceived fitness ($r = 0.35$; $p < 0.001$), no significant correlations were found with other health-related aspects. Moreover, higher levels of mindfulness are significantly associated with higher psychological well-being ($r = 0.53$; $p < 0.001$), the latter is positively correlated with self-rated health ($r = 0.51$; $p < 0.001$), and sleep quality ($r = 0.39$; $p < 0.001$).

Discussion and conclusions: The research findings can serve as a baseline for enhancing healthy behaviors and thus improving well-being and satisfaction among employees in education. In addition, the findings point to the potential benefits of practicing mindfulness as a psychological resource that can contribute to an individual's well-being and quality of life. Further research on these topics seems particularly relevant for improving health for all those involved in children's education and development.

Keywords: mindfulness, psychological well-being, health-related behaviours, early childhood education

Kakovost življenja v povezavi z ustnim zdravjem pri odraslih prebivalcih Slovenije v 2019

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Uvod: Težave z ustno votlino in/ali zobmi povzročajo bolečine, nelagodje in omejitve pri opravljanju funkcij tega področja in slabšajo kakovost življenja. S kakovostjo življenja v povezavi z ustnim zdravjem (KŽpUZ) lahko ocenimo vpliv ustnega zdravja na posameznikovo življenje, samopodobo, socialne interakcije in delovno uspešnost.

Metode: V »Nacionalni raziskavi o ustnem zdravju odraslih v Sloveniji leta 2019« smo z anketnim vprašalnikom pri 3.200 odraslih prebivalcih Slovenije, starih med 18 in 74 let, spremljali kazalnike KŽpUZ. Sodelujoči so po pošti prejeli povabilo za sodelovanje v spletni anketi, starejšim od 44 let smo ob obvestilnem pismu priložili še pisno obliko vprašalnika. Vprašanja o KŽpUZ so se nanašala na pogostost težav pri uživanju hrane, napeto počutje zaradi težav z ustno votlino ali/in zobmi, težave pri opravljanju dnevnih obveznosti, prisotnost zobobola in prisotnost bolečih dlesni/ranic v ustih ter omejitve v socialnih stikih zaradi videza zob/zobne proteze. Podatke smo analizirali glede na demografske podatke. Za statistično analizo razlik med kategorijami smo uporabili test hi-kvadrat (χ^2) in test CCP.

Rezultati: Pri 31,9 % odraslih je KŽpUZ občasno ali pogosteje zmanjšana zaradi ene ali več omejitev zaradi težav z zobmi. Občasno ali pogosteje je 27 % odraslih imelo boleče dlesni/ranice v ustih, 20 % jih je zaradi težav z ustno votlino ali/in zobmi težko jedlo in 19 % se jih je počutilo napeto zaradi težav z ustno votlino ali/in zobmi. O težavah pri opravljanju vsakodnevnih obveznosti zaradi težav z ustno votlino ali/in zobmi je poročalo 10 % in o zobobolu 12 % odraslih; razlik med deležem moških in žensk nismo zasledili. Starejši od 54 let so v primerjavi z mlajšimi pogosteje težko jedli hrano (test $\chi^2 = 22,434$, $p < 0,001$). O omejitvah zaradi težav z ustno votlino ali/in zobmi je poročal večji delež odraslih z nižjo izobrazbo. Zaradi težav z ustno votlino ali/in zobmi je težko jedlo hrano 27 % odraslih z osnovnošolsko, 20 % s srednješolsko in 13 % z višješolsko izobrazbo (test $\chi^2 = 11,388$, $p = 0,003$), težave pri opravljanju vsakodnevnih obveznosti je imelo 12 % odraslih z osnovnošolsko in srednješolsko ter 6 % z višješolsko izobrazbo (test $\chi^2 = 6,491$, $p = 0,039$) in zobobol je imelo 19 % odraslih z osnovnošolsko, 13 % s srednješolsko in 9 % z višješolsko izobrazbo (test $\chi^2 = 6,491$, $p = 0,039$). Podobne razlike glede na izobrazbeni status smo odkrili tudi pri omejitvah v socialnih stikih zaradi videza zob/zobne proteze.

Razprava in zaključek: KŽpUZ se povezuje s socioekonomskimi dejavniki, kot sta starost in izobrazba, ne pa tudi s spolom. Delež oseb, ki KŽpUZ ocenjujejo bolj negativno, je višji med starejšimi od 44 let in med nižje izobraženimi; razlike glede na KŽpUZ kažejo na večjo ranljivost starejših oseb in tistih z nižjo izobrazbo. Poznavanje demografskih in socioekonomskih značilnosti skupin prebivalstva s slabšo KŽpUZ je ključno za pripravo ustreznih javnozdravstvenih pristopov za izboljšanje in krepitev ustnega zdravja odraslih prebivalcev Slovenije.

Ključne besede: kakovost življenja, ustno zdravje, skrb za ustno zdravje

Oral health-related quality of life in the adult population of Slovenia in 2019

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Introduction: Problems with the oral cavity and/or teeth cause pain, discomfort and functional limitations of the oral cavity and/or teeth and affect quality of life. Oral health-related quality of life (OHRQoL) can assess the impact of oral health on a person's life, self-image, social interactions and work performance.

Methods: As part of the »National Oral Health Survey of Adults in Slovenia in 2019«, indicators of OHRQoL were monitored using a questionnaire among 3,200 adults in Slovenia aged 18 to 74 years. Participants received an invitation to the online survey by post, and a written questionnaire was included in the notification letter for people over 44 years of age. The OHRQoL questions related to the frequency of eating difficulties, feelings of tension due to oral and/or dental problems, problems performing daily tasks, dental pain, painful gums/mouth sore and limitations in social interactions due to the appearance of teeth. The results were analysed using demographic data. The chi-square (χ^2) test and the CCP test were used to statistically analyse the differences between the categories.

Results: 31.9% of adults occasionally or more often experienced a decrease in OHRQoL due to one or more limitations caused by oral and/or dental problems. Occasionally or more often, 27% of adults reported painful gums/mouth sore, 20% had difficulty eating and 19% felt tense due to oral and/or dental problems. 10% reported difficulties performing daily tasks and 12% reported dental pain; no differences were found between men and women. Adults over 54 years of age were more likely to have difficulties eating than younger people (χ^2 test=22.434, $p<0.001$). A higher proportion of adults with less education reported limitations due to problems with the oral cavity and/or teeth. Difficulty eating was reported by 27% of adults with primary, 20% with secondary and 13% with at least tertiary education (χ^2 test=11.388, $p=0.003$). 12% of adults with primary and secondary education and 6% with at least tertiary education reported difficulties performing daily tasks (χ^2 test=6.491, $p=0.039$), and dental pain was reported by 19% of adults with primary, 13% with secondary and 9% with at least tertiary education (χ^2 test=6.491, $p=0.039$). Similar differences in educational status were also found for limitations in social interactions due to dental appearance.

Discussion and conclusions: OHRQoL is related to socioeconomic factors such as age and education, but not to gender. The proportion of people who rate their OHRQoL more negatively is higher among those over 44 years of age and those with less education. The differences in OHRQoL indicate that older people and people with less education are more at risk. Understanding the socioeconomic characteristics of populations with poorer OHRQoL is crucial for appropriate public health approaches to improve the oral health of the adult population in Slovenia.

Keywords: quality of life, oral health, oral health care

Znanje in uporaba probiotikov med starejšimi ljudmi v Štajerski regiji

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Uvod: Probiotiki so živi mikroorganizmi, ki pozitivno učinkujejo na zdravje gostitelja, kadar jih apliciramo v zadostnih količinah. Znanstveni dokazi o koristih probiotikov za človeško zdravje med drugim vključujejo zdravljenje ali preprečevanje driske in različnih črevesnih bolezni, duševno zdravje, celjenje ran ter krepitev imunskega sistema. To je še posebej pomembno za starejše osebe z boleznimi, povezanimi s starostjo, in neželenimi spremembami imunske funkcije. Ta raziskava je imela namen preučiti znanje in uporabo probiotikov med starejšimi osebami.

Metode: Raziskava je temeljila na kvantitativni raziskovalni metodologiji z uporabo presečne študije. Podatki so bili zbrani s pomočjo strukturiranega vprašalnika, ki je vseboval 14 vprašanj in je bil razdeljen med člane Združenja starejših oseb v Štajerski regiji. Razdelili so 70 vprašalnikov, vsi so bili vrnjeni in pravilno izpolnjeni.

Rezultati: Med 70 udeleženci je bilo 49% žensk in 51% moških, starih med 65 in 80 let (povprečna starost 72,9 let). Večina jih živi na podeželju (64%), 10% v mestu in 26% v predmestju. 51% jih je zaključilo srednjo šolo, 40% osnovno šolo, 8% pa je imelo univerzitetno izobrazbo. Večina udeležencev ni poznala probiotikov in jih je zamenjevala za vlaknine (90 %) ali vitamine (4 %). Samo 6 % jih je poznalo pravilno definicijo. Kljub temu je 91% priznalo njihov vpliv na prebavo, 86% na imunski sistem, 49% na holesterol in 32% na alergije. Medtem ko jih je 69% vedelo, da so probiotiki lahko v obliki prehranskih dopolnil, jih večina uživa kot funkcionalna živila. Po drugi strani uživajo različna fermentirana živila, kot so kisló zelje, jogurt, sir, ki vsebujejo koristne mikroorganizme. Udeleženci so iskali informacije o probiotikih na spletu, na televiziji in v lekarnah, pri čemer so zdravniške ordinacije ocenili kot najmanj verjeten vir informacij.

Razprava in zaključek: Naši ugotovitve so bile skladne s prejšnjimi študijami med starejšimi ljudmi, in sicer, da probiotiki niso dobro poznani med starejšimi ljudmi. Kljub temu so se zavedali pozitivnih učinkov, ki jih lahko doprinesejo probiotiki, kot je pomoč pri uravnavanju prebave in vpliv na imunski sistem. Glede na številne prednosti probiotikov njihova uporaba predstavlja ključen dodatek k prehrani, še posebej za starejše ljudi. Osnova promocije zdravja, predvsem spodbujena s strani zdravstvenih delavcev, bi morala vključevati izobraževanje posameznikov o koristnih učinkih probiotikov. Zavedanje, da so zdravniške ordinacije med najmanj verjetnimi viri informacij o probiotikih v naši študiji, kaže na pomembnost zdravstvenih delavcev kot osrednjega vira takšnega znanja, namesto, da bi se popolnoma zanašali le na splet, radijske in televizijske oddaje ali družabne medije.

Ključne besede: probiotiki, koristni mikroorganizmi, upokožitev, znanje, starejše osebe, prehrana.

Knowledge and usage of probiotics among older people in Styria Region

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Introduction: Probiotics are live microorganisms that, when administered in adequate amounts confer a health benefit to the host. Scientific evidence of probiotic benefits on human health includes treatment or prevention of diarrhoea and various bowel diseases, mental health, wound healing and strengthening the immune system. This is especially important for older people with age-related diseases and adverse changes in immune function. This study aimed to examine the knowledge and usage of probiotics among older people.

Methods: The study was based on quantitative research methodology, using cross-sectional design. Data was collected using a structured questionnaire containing 14 questions distributed among members of the older people's Association in Styria Region. 70 questionnaires were distributed and all of them were returned and correctly completed.

Results: Among 70 participants, 49% were female and 51% male, aged 65-80 (average 72.9). Most reside in rural areas (64%), 10% in cities, and 26% in suburbs. 51% completed secondary school, 40% completed primary school and 8% held a university degree. Most were unfamiliar with probiotics, mistaking them for fiber (90%) or vitamins (4%). Only 6% knew the correct definition. However, 91% acknowledged their impact on digestion, 86% on the immune system, 49% on cholesterol, and 32% on allergies. While 69% knew probiotics could be dietary supplements, most consumed them as functional foods despite available supplements. On the other hand, they consume various fermented foods such as sauerkraut, yogurt, cheese that contain beneficial microbes. Participants sought probiotic information online, on TV, and in pharmacies, considering doctors' offices the least likely source.

Discussion and conclusions: Our findings were consistent with previous studies reported among older people, namely that probiotics are not well-known among older people. However, they are familiar with the positive effects that probiotics can confer such as aiding in digestion and influence on the immune system. Considering the numerous advantageous effects of probiotics, their consumption constitutes a vital adjunct to nutrition, particularly for older people. A cornerstone of health promotion, predominantly facilitated by healthcare professionals, should encompass educating individuals on the beneficial impacts of probiotics. Acknowledging that doctors' offices were among the least likely venues for probiotic information dissemination in our study, this shows the significance of health workers serving as the principal source of such knowledge, rather than relying solely on the internet and broadcast media or social media.

Keywords: probiotics, beneficial microorganisms, retirement, knowledge, older people, nutrition.

Vino z manj žvepla

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Izhodišča in namen: Žveplov dioksid je potencialno najpomembnejše dražilno sredstvo v vinu. ILO (International Labour Organization) priporoča, da se izogibate žveplovega dioksida, če imate bronhitis, astmo, konjuktivitis, emfizem, bolezn srca in ožilja. Po priporočilih Svetovne zdravstvene organizacije se naj ne bi dnevno užilo preko 25 mg SO_2 /osebo. V vinu je žveplo definirano kot prosti in skupni SO_2 . Prosti SO_2 predstavlja žveplov dioksid, ki ni vezan na acetaldehid, druge aldehide ali organske spojine. Skupni SO_2 je definiran, kot vsota vseh zvrsti (specij) žveplovega dioksida v vinu (molekularna, bisulfitna in sulfitna) bodisi v prosti ali vezani obliki.

Predstavitev vsebine: Majhen delež žveplovega dioksida v vinu je posledica delovanja vinskih kvasovk v procesu fermentacije mošta. Glavnina žveplovega dioksida v vinu je dodanega v tehnološkem postopku predelave grozdja in nege vina. Najvišje dovoljene vsebnosti žveplovega dioksida v vinu predpisuje vinarska zakonodaja. Belo in rose vino, ki vsebuje manj kot 7g/l reducirajočih sladkorjev in je definirano kot vrhunsko vino sme vsebovati največ 180 mg/l skupnega SO_2 . Rdeče vrhunsko vino, ki vsebuje do 7g/l reducirajočih sladkorjev sme vsebovati največ 140 mg/l skupnega SO_2 . Že nekaj časa se v strokovnih krogih pripravljajo pobude za znižanje dovoljenih vsebnosti SO_2 v vinu. Pridelovalcem vina bodo te zahteve pomenile dodaten izziv, vendar menimo, da bo v prihodnje vino s čim manj žvepla pomembna konkurenčna prednost vinarja. Na voljo so sodobne tehnologije predelave grozdja s katerimi lahko precej reduciramo uporabo žvepla.

Sklepne ugotovitve: Mnoge kleti v Sloveniji so v zadnjih letih, tudi s pomočjo evropskih sredstev investirale v opremo za vzpostavitev reduktivnih pogojev v pridelavi vina. S posebnimi stiskalnicami z možnostjo vpihovanja dušika oziroma ogljikovega dioksida se onemogoči vezava kisika, kar zavre rast mikroorganizmov. Zmanjševanje vezave kisika in posledično manjša potreba po uporabi žvepla se doseže tudi v pogojih, ko vino hranimo v sodobnih posodah v katerih s pomočjo inertnih plinov (dušik, ogljikov dioksid, argon) reduciramo vezavo kisika. Zanimive rešitve za zmanjšanje potreb po uporabi žvepla ponujajo novejša raziskava o postopkih fizikalne obdelave vina. Najboljše rezultate so dobili pri UHPH (Ultra High-Pressure Homogenization) obdelavi vina. Pri tej obdelavi je mošt izpostavljen visokim tlakom, posledično tudi visoki temperaturi (100 °C in več), vendar za zelo kratek čas, običajno 0,2s za celoten proces. Izsledki omenjenih raziskav so obetavni, predvsem zaradi antimikrobne in antiencimske učinkovitosti in zelo majhnega senzoričnega vpliva.

Gljučne besede: vino, žveplov dioksid, tehnološki postopek

Wine with less sulphur

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Introduction and purpose: Sulphur dioxide is potentially the most important irritant in wine. The ILO (International Labour Organisation) recommends avoiding sulphur dioxide if you suffer from bronchitis, asthma, conjunctivitis, emphysema, cardiovascular disease. According to the WHO recommendations, no more than 25 mg SO₂/person should be consumed daily. In wine, sulphur is defined as free and total SO₂. Free SO₂ represents sulphur dioxide that is not bound to acetaldehyde, other aldehydes or organic compounds. Total SO₂ is defined as the summary of all the species (speciation) of sulphur dioxide in wine (molecular, bisulphite and sulphite) in either free or bound form.

Content presentation: The small proportion of sulphur dioxide in wine is result to the action of wine yeasts in the fermentation of the must. Most of the sulphur dioxide in wine is added during the technological process of grape processing and wine care. The maximum levels of sulphur dioxide in wine are prescribed by wine legislation. White and rosé wine which are containing less than 7g/l reducing sugars and defined as a premium wine may contain a maximum of 180 mg/l total SO₂. A premium red wine containing up to 7 g/l reducing sugars may contain a maximum of 140 mg/l total SO₂. For some time now, initiatives have been made in professional circles to lower the permitted SO₂ content in wine. These requirements will be an additional challenge for wine producers, but we believe that in the future, wine with as little sulphur as possible will be an important competitive advantage for winemakers. Modern grape processing technologies are available to reduce sulphur use significantly.

Conclusions: Many wineries in Slovenia have invested in equipment to create reducing conditions in wine production in recent years, also with the help of European funding. Special presses with the possibility of injecting nitrogen or carbon dioxide are used to prevent the binding of oxygen, which inhibits the growth of micro-organisms. The reduction in oxygen fixation and the consequent reduction in the need to use sulphur is also achieved in the conditions in which wine is stored in modern containers in which inert gases (nitrogen, carbon dioxide, argon) are used to reduce oxygen fixation. Recent research on physical treatment processes for wine offers interesting solutions to reduce the need for sulphur. The best results have been obtained with UHPH (Ultra High-Pressure Homogenisation) wine treatment. In this treatment, the must is exposed to high pressures and consequently high temperatures (100 °C and above), but for a very short time, typically 0.2 s for the whole process. The results of the above-mentioned studies are promising, in particular because of their antimicrobial and antienzymatic efficacy and very low sensory impact.

Keywords: wine, sulphur dioxide, technological process

Dejavniki tveganja, ki vplivajo na poslabšanje kronične ledvične bolezni

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Uvod: Porast debelosti, sarkopenije in staranja na svetovni ravni je vplivalo na porast števila primerov kronične ledvične bolezni (KLB). Debelost, upad mišične mase in moči ter sarkopenična debelost (SD) so prisotni pri bolnikih s KLB ter so povezani s slabšo klinično napovedjo in višjim tveganjem za smrtnost. SD je kronično stanje, za katerega je značilen soobstoj upada mišične mase in soobstoj debelosti. Razširjenost SD je posledica staranja populacije in sprememb življenjskega sloga v preteklih desetletjih. SD je zaradi nejasnih simptomov in slabo definirane metodologije pri odkrivanju velikokrat spregledana, kar ima lahko negativne posledice za bolnike in druge posameznike. V ta namen smo na hemodializnih bolnikih s kronično ledvično odpovedjo preverjali mišično maso in moč, prisotnost debelosti in sarkopenije.

Metode: V študijo je bilo vključenih 55 hemodializnih bolnikov moškega spola, starih nad 70 let, ki se zdravijo na kliničnem oddelku za nefrologijo, na Oddelku za akutno in komplicirano dializo v Univerzitetnem kliničnem centru Ljubljana. V raziskavo smo vključili samo bolnike brez aktivne infekcijske bolezni in drugih bolezni z glomerulno filtracijo (oGF) <10 ter jih razdelili v dve skupine glede na indeks telesne mase (ITM); ITM >25 kg/m² in ITM ≤ 25 kg/m²). Z uporabo bioimpedančnega analizatorja telesne sestave (Akern), smo merili telesno sestavo pacientov in spremljali maščobno (FM) in ter пусто mišično maso (FFM) ter računali razmerje med obema. Za moč stiska roke smo uporabili hidravlični dinamometer, za mišični funkcionalni test pa test-vstani-sedi. Opravljene so bile biokemične meritve lipidograma, glukoze in C-reaktivnega proteina (CRP) ter opravljen je bil kratek validiran vprašalnik za telesno aktivnost NPAQ. Raziskavo je odobrila nacionalna komisija za medicinsko etiko (KME RS 0120-179/2023).

Rezultati: Skupina moških bolnikov z ITM ≥ 25 kg/m² je imela značilno povišano telesno in maščobno maso (FM) ($p < 0,001$), ter obseg pasu ($p < 0,001$). Prav tako se je med skupinama pokazala značilna razlika v moči stiska roke, ($p < 0,05$). Pri ostalih parametrih značilnih razlik med skupinama nismo dobili. Mejne vrednosti sistoličnega krvnega tlaka, glukoze, trigliceridov so v skupini bolnikov z ITM ≥ 25 kg/m² presegle mejne vrednosti, kar nakazuje na večji vnetni status pri omenjenih bolnikih. Bolniki v obeh skupinah niso dosegli priporočil SZO za telesno aktivnost, kar lahko negativno vpliva na telesno sestavo in splošno zdravje. Sarkopenična debelost smo definirali samo pri enem bolniku. Prav tako smo ugotovili, da je bil aterogeni indeks plazemskih lipoproteinov (AIP) povišan pri moških bolnikih z ITM > 25 kg/m².

Zaključki: Rezultati so pokazali pomembno povezanost med ITM, telesno sestavo in biokemičnimi merili pri bolnikih s KLB, zlasti pri tistih z ITM ≥ 25 kg/m². Bolnikov v tej skupini imajo slabšo mišično maso in moč, višji delež maščevja ter obseg trebuha, kar nakazuje na vnetno stanje, ki je pomemben dejavnik pri napredovanju KLB. Povišan AIP pa kaže na srednje tveganje za aterosklerozo in koronarno srčno bolezen. Na podlagi rezultatov vprašalnika ter ostalih parametrov, bi bilo smiselno redno spremljati telesno maso, telesno sestavo bolnikov ter telesno aktivnost, saj se parametri povežni z mišično maso nižji od pričakovanih.

Gljučne besede: sarkopenija, debelost, kronična ledvična bolezen

Risk Factors of Chronic Kidney Disease Progression

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Introduction: The global increase in obesity, sarcopenia and ageing has contributed to the rise in chronic kidney disease (CKD). Obesity, loss of muscle mass and strength and sarcopenic obesity (SO) occur in CKD patients and are associated with a poorer clinical prognosis and a higher risk of death. SO is a chronic condition characterised by the simultaneous presence of muscle wasting and obesity. The prevalence of SD is due to the ageing of the population and lifestyle changes in recent decades. SD is often overlooked due to unclear symptoms and poorly defined detection methods, which can have negative consequences for patients and others. To this end, we examined muscle mass and strength, the presence of obesity and sarcopenic obesity in haemodialysis patients with chronic renal failure.

Methods: The study included 55 male haemodialysis patients aged 60 years and older with treated at the Department of Nephrology, Department of Acute and Complicated Dialysis, University Hospital Ljubljana. Only patients without active infectious disease and with a glomerular filtration rate (oGF) <10 were included in the study and divided into two groups based on their BMI : BMI >25 kg/m² and BMI ≤ 25 kg/m². Using a bioimpedance body analyser (Akern), we measured the patients' body composition and monitored fat mass (FM) and fat-free muscle mass (FFM) and calculated the FM/FFM ratio, as well as the body shape index. Handgrip strength was tested with a hydraulic dynamometer and muscle function was assessed with a sit-to-stand test. Biochemical measurements of lipidogram, glucose and C-reactive protein (CRP) were performed and a short validated physical activity questionnaire (NPAQ) was completed. The study was approved by the National Medical Ethics Committee (KME RS 0120-179/2023).

Results: The group of male patients with a BMI ≥ 25 kg/m² had significantly increased body and fat mass (FM) (p < 0.001) and waist circumference (p < 0.001). There was also a significant difference in handgrip strength between the two groups (p < 0.05), but no significant differences were found between the groups for other parameters. Systolic blood pressure, blood glucose and triglycerides exceeded the cut-off values in the group of patients with a BMI ≥ 25 kg/m², indicating a higher inflammatory status in these patients. Patients in both groups did not meet the WHO recommendations for physical activity, which may have a negative impact on body composition and overall health. Sarcopenic obesity was found in only one patient. We also found that the atherogenic index of plasma lipoproteins (AIP) was elevated in male patients with a BMI > 25 kg/m².

Conclusions: The results showed a significant association between BMI, body composition and biochemical measures in patients with CKD, particularly those with a BMI ≥ 25 kg/m². Patients in this group have lower muscle mass and strength, higher fat percentage and abdominal circumference, suggesting an inflammatory state, which is an important factor in the progression of CKD. Based on the results of the questionnaire and other parameters, it would be useful to regularly monitor patients' body weight, body composition and physical activity, as the parameters related to muscle mass are lower than expected.

Keywords: sarcopenia, obesity, chronic kidney disease

Promocija zdravega življenjskega sloga in vloga zdravstvenih delavcev pri ženskah s sindromom policističnih jajčnikov

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Uvod: Policistični jajčniki se lahko pojavijo kot samostojen pojav ali kot sindrom policističnih jajčnikov (v nadaljevanju PCOS), ki poleg značilne ultrazvočne slike vključuje tudi druge simptome, kot so motnje menstruacijskega cikla in klinični znaki hiperandrogenizma. Ta kompleksen sindrom lahko močno vpliva na reproduktivno, presnovno in psihološko zdravje ter kakovost življenja žensk. Namen prispevka je s pregledom literature ugotoviti učinke zdravega življenjskega sloga pri ženskah s PCOS ter pomanjkljivosti svetovanja, ki ga zdravstveni delavci izvajajo v okviru promocije zdravega življenjskega sloga za ženske s PCOS.

Metode: Raziskava temelji na pregledu domače in tuje strokovne literature, ki smo jo zbirali v obdobju od oktobra 2022 do februarja 2023. Do nje smo dostopali v podatkovnih bazah ProQuest, ScienceDirect in Google učenjak. Za iskanje smo uporabili ključne besede: policistični jajčniki, življenjski slog, zdravstveni delavci, zdravljenje, polycystic ovaries, lifestyle, healthcare, workers, treatment. Pri izboru literature smo upoštevali sledeče kriterije: objava v slovenskem in angleškem jeziku, prosta dostopnost člankov, povezanost z izbrano temo objava med letoma 2003 in 2023.

Rezultati: Izmed 24.823 identificiranih zadetkov je bilo v končno analizo vključenih 10 člankov. Ugotovljeno je bilo, da zdravstveni delavci spodbujajo ženske k spremembi življenjskega sloga. S prehransko anamnezo ugotovijo njihove prehranjevalne navade ter jih poučijo o pomenu primerne telesne mase in količini obrokov. V primeru težav s hirsutizmom in aknami jim predlagajo obisk dermatologa in jih informirajo o možnostih zdravljenja. Na ta način se zmanjša možnost pojava zapletov, ki so posledica nezdravega življenjskega sloga. Ovire zdravstvenih delavcev pa so nezadostno znanje o PCOS in pomanjkanje časa za posvetovanje.

Razprava in zaključki: PCOS je pogosto neprepoznan, kar lahko privede do resnih zapletov. Za obvladovanje te bolezni sta bistvena zgodnje odkrivanje in celostno zdravljenje, ki vključuje spremembo življenjskega sloga, pri čemer imajo zdravstveni delavci pomembno vlogo pri nudenju informacij, podpore in motivacije. Izobraževanje pacientk o njihovi bolezni in podpora skupin za samopomoč sta prav tako bistvena. Celosten pristop je ključnega pomena za uspešno obvladovanje sindroma policističnih jajčnikov in zmanjšanje tveganja za zaplete.

Ključne besede: policistični jajčniki, življenjski slog, zdravstveni delavci, zdravljenje

Promotion of a healthy lifestyle and the role of healthcare workers in women with Polycystic ovaries

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Introduction: Polycystic ovaries can occur as a stand-alone condition or as a polycystic ovary syndrome (in hereafter referred to as PCOS), which, in addition to the characteristic ultrasound picture, also includes other symptoms, such as menstrual cycle disturbances and clinical signs. hyperandrogenism. This complex syndrome can have a profound reproductive impact, metabolic and psychological health, and women's quality of life. The aim of this paper is to determine the effects of a healthy lifestyle in women with PCOS and the disadvantages of counselling, that health professionals provide in the context of healthy lifestyle promotion for women with PCOS.

Methods: The research is based on a review of domestic and foreign literature collected between October 2022 and February 2023, accessed from ProQuest, ScienceDirect and Google Scholar. We used the following keywords: polycystic ovaries, lifestyle, healthcare, workers, treatment, polycystic ovaries, lifestyle, healthcare, workers, treatment. The following criteria were considered for the selection of the literature: publication in Slovene and English, open accessibility of the articles, relevance to the selected topic, publication between 2003 and 2023.

Results: Of the 24,823 hits identified, 10 articles were included in the final analysis. It was found that health professionals encourage women to make lifestyle changes. They take a dietary history to determine their eating habits and educate them about the importance of adequate body weight and meal quantity. In case of problems with hirsutism and acne, they are suggested to see a dermatologist and informed about treatment options. In this way, the possibility of complications resulting from an unhealthy lifestyle is reduced. However, barriers for health professionals are insufficient knowledge about PCOS and lack of time for consultation.

Discussion and conclusions: PCOS is often unrecognised, which can lead to serious complications. Early detection and comprehensive treatment involving lifestyle changes are essential to manage the disease, with health professionals playing an important role in providing information, support and motivation. Educating patients about their disease and supporting self-help groups are also essential. A holistic approach is key to successfully managing polycystic ovary syndrome and reducing the risk of complications.

Keywords: polycystic ovary syndrome, lifestyle, health professionals, treatment

Iskanje vedenj zdravja kot diagnoza promocije zdravja/zdravstvene nege pri starejših

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Uvod: Po klasifikaciji Združenih narodov med starejše odrasle uvrščamo osebe, stare 65 let in več. Diagnoze promocije zdravja/zdravstvene nege označujejo klinične presoje o motivaciji in želji po izboljšanju dobrega počutja in uresničevanju zdravstvenega potenciala. Vedenja, ki iščejo zdravje, pomenijo proaktivna prizadevanja posameznikov v stabilnem zdravju za izboljšanje zdravja. Namen te študije je razjasniti postopek pridobivanja bistvenih podatkov za diagnosticiranje diagnoz promocije zdravja/zdravstvene nege, s poudarkom zlasti na vedenju iskanja zdravja, z oceno dobrega počutja starejših odraslih ki temelji na vzorcih psihofizičnega delovanja po Marjory Gordon.

Metode: Pregled povzema razpoložljivo literaturo o ocenah zdravstvenega delovanja. Zbrane podatke smo razvrstili v 11 vzorcev psihofizičnega delovanja po M. Gordon. Prispevek je sestavljen s programom Canva ob upoštevanju smernic za izdelavo izobraževalnih programov.

Rezultati: Ta študija sintetizira ključne podatke za diagnosticiranje diagnoz promocije zdravja in dobrega počutja, s posebnim poudarkom na vedenju, ki išče zdravje. Podatki so bili organizirani v skladu z 11 vzorci delovanja zdravja, ki jih je opisal M. Gordon. Po zbiranju podatkov je bil izdelan načrt zdravstvene nege za navedeno diagnozo. Pridobljeni podatki poudarjajo pomen posameznikovega življenjskega sloga, socialnih, kulturnih in verskih prepričanij ter pomen uporabe ocenjevalnih lestvic za ocenjevanje in spremljanje posameznikovega stanja.

Razprava in zaključki: Izboljšanje kakovosti življenja neposredno vpliva na zdravje posameznika. V zdravstveni negi ne smemo spregledati starejših posameznikov brez ugotovljenih težav z nego; sprejeti je treba preventivne ukrepe za prepoznavanje diagnoz promocije zdravja in dobrega počutja. Natančna ocena zdravstvenega stanja po vzorcih psihofizičnega delovanja po M. Gordonu je ključnega pomena pri postavljanju diagnoze promocije zdravja in zdravstvene nege. Takšen proces zdravstvene nege je ključnega pomena pri preprečevanju kroničnih bolezni, krepitvi zdravja in podpiranju aktivnega, zdravega staranja.

Ključne besede: ocena, promocija zdravja/zdravstvene nege, starejši odrasli

Health-Seeking Behaviors as health promotion/wellness nursing diagnoses in elderly

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Introduction: According to the United Nations classification, individuals at the age of 65 and older are considered elderly. Within this demographic, those who maintain functional ability are termed gerontologically insured individuals. Health promotion/wellness nursing diagnoses denote clinical judgments about the motivation and desire to enhance well-being and realize health potential. Health-seeking behaviors signify proactive efforts toward health improvement by individuals in stable health. This study aims to elucidate the process of acquiring essential data for diagnosing health promotion/wellness nursing diagnoses, focusing particularly on Health-Seeking Behaviors, through a wellness assessment of the elderly grounded in Marjory Gordon's patterns of psychophysical functioning.

Methods: This review summarizes the available literature on health functioning assessments. The collected data were categorized into 11 patterns of psychophysical functioning as delineated by M. Gordon. The paper was compiled using the Canva program while adhering to guidelines for educational program creation.

Results: This study synthesizes critical data for diagnosing health promotion and wellness nursing diagnoses, with special emphasis on Health-Seeking Behaviors. The data were organized according to the 11 health functioning patterns outlined by M. Gordon. After data collection, a nursing care plan was made for the specified diagnosis. The obtained data emphasize the significance of individual lifestyle, social, cultural, and religious beliefs, as well as the importance of utilizing assessment scales to evaluate and monitor the individual's condition.

Discussion and Conclusions: Enhancing quality of life has a direct impact on individual health. Elderly individuals without diagnosed nursing problems should not be overlooked in nursing care; preventive measures should be adopted to identify health promotion and wellness nursing diagnoses. Accurate assessment of health status, following M. Gordon's patterns of psychophysical functioning, is crucial in diagnosing health promotion and wellness nursing diagnoses. Such a nursing care process is instrumental in averting chronic diseases, promoting health, and supporting active, healthy aging.

Keywords: assessment, health promotion/wellness nursing diagnoses, elderly

Elderspeak: Kaj to pomeni?

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Izhodišča in namen: Starost je prisotna v vsakodnevni praksi zdravstvene nege in je včasih lahko prikrita s humorjem ali trditvami o zagovarjanju interesov starejših odraslih. Elderspeak ali infantilizirajoča komunikacija je oblika interakcije, ki jo pogosto uporabljajo dobronamerni skrbniki, ki se morda ne zavedajo negativnih sporočil in posledic, ki jih prenašajo na starejše odrasle. V tem prispevku bomo opisali komunikacijske prakse, ki jih uporablja osebje pri delu s starejšimi odraslimi.

Predstavitev vsebine: Govor starejših, ki je bil prvič opisan kot "otroški govor", se s strani negovalnega osebja implicitno izraža tako na mikro kot na makro ravni. Zanj so značilni uporaba pomanjševalnic, ponavljanje, pretirana intonacija, preprost besednjak in neustrezni ljubkovalni izrazi (kot so sladkorček, dojenček, babica, dragi, ljubezen). Pogosto se pri delu s starejšimi odraslimi izražamo, kot naprimer "Ali smo pripravljene na kopanje?", kar je neprimerno, saj se negovalci ne kopajo s starejšimi. Namesto tega je bolje primerno vprašati "Ali vam lahko pomagam, da se pripravite na kopel?" Govor starejših se najpogosteje uporablja, ko osebje pozna oskrbovanca in, če ima oskrbovanec kognitivne motnje, zlasti med vsakodnevnimi dejavnostmi. Nekatere posledice te oblike komunikacije vključujejo umik uporabnika, zmanjšano samozavest, depresijo in odvisnost od drugih. Starejši odrasli, ki se lahko sporazumevajo, menijo, da je ta način komunikacije neprimeren. Poleg tega so študije na splošno pokazale, da se na medicinske sestre, ki se na tak način pogovarjajo s starejšimi odraslimi gleda bolj nestrokovnost, nespoštljivo, neprijazno, neustrežljivo in neusposobljeno, kot na medicinske sestre, ki govorijo primerno. Čeprav je skrit in govorcu pogosto neznan, se govor starejših uporablja za nadzor vedenja, izražanje odvisnosti, omejevanje pogovora in namigovanje na pomanjkanje kompetenc. Prepoznavanje te nesprejemljive oblike komunikacije in zagotavljanje usposabljanja komunikacijskih veščin sta priznani intervenciji za premagovanje govora starejših

Sklepne ugotovitve: Elderspeak kot prikrito obliko staranja v vsakodnevnih interakcijah s starejšimi odraslimi je treba priznati, ker lahko negativno vpliva na njihovo splošno socialno in psihološko zdravje. Čeprav se morda zdi dobronamerno, je zamenjava z učinkovitejšimi oblikami komunikacije prek različnih izobraževalnih pobud nujna.

Gljučne besede: starost, sporazumevanje, elderspeak, zdravstvena nega

Elderspeak: What is it?

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Introduction and purpose: Ageism is present in everyday nursing practice and can sometimes be disguised through humor or claims of advocating for the interests of older adults. Elderspeak, or infantilizing communication, is a form of interaction often used by well-intentioned caregivers who may not realize the negative messages and consequences it conveys to the older adults. In this paper, we will describe the communication practices employed by staff when working with older adults.

Content presentation: First described as “baby talk,” elderspeak is expressed implicitly at both micro and macro levels by nursing staff. It is characterized by the substitution of collective pronouns, the use of diminutives, repetition, exaggerated intonation, simple vocabulary, reduced grammatical complexity, and inappropriate terms of endearment (such as “honey,” “baby,” “grandma,” “sweetie,” “dear,” “love”). Often, when working with the older adults, phrases like “Are we ready for our bath?” are used, which is inappropriate because the care staff does not bathe with the older adults. Instead, asking “Can I help you get ready for a bath?” affirms the older adult as an individual with choices and capable of independent action. Elderspeak is most often used when staff are familiar with the resident and when the resident has a cognitive impairment, especially during activities of daily living. Some of the consequences of this form of communication include user withdrawal, reduced self-confidence, depression, and dependence on others. Older adults who can communicate consider this way of communication inappropriate. Furthermore, studies have generally found that nurses who use elderspeak are viewed more negatively on several traits, such as professionalism, respect, friendliness, helpfulness, and competence, than nurses who speak neutrally. Although hidden and often unknown to the speaker, elderspeak is used to control behavior, express dependence, limit conversation, and imply a lack of competence. Recognizing this unacceptable form of communication and providing communication skills training are recognized interventions for overcoming elderspeak.

Conclusions: Elderspeak, as a veiled form of ageism in everyday interactions with older adults, should be recognized because it can negatively affect their overall social and psychological health. Although it may seem well-intentioned, replacing it with more effective forms of communication through various educational initiatives is essential.

Keywords: ageism, communication, elderspeak, nursing care

Izboljšanje gibljivosti hrbtenice s prilagojeno vadbo s pomočjo umetne inteligence: primerjalna študija učinkovitosti programske opreme Kemtai

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Uvod: Kemtai je vadbena platforma, ki uporablja umetno inteligenco in računalniški vid za sledenje gibanju uporabnikov ter ponuja prilagojene vadbene in povratne informacije. Vsebuje različne vadbene programe, prilagojene ravni telesne pripravljenosti in ciljem uporabnikov, s ciljem povečati učinkovitost in motivacijo domačih vadb z zagotavljanjem interaktivne podpore in spremljanja napredka.

Metode: V naši študiji smo želeli oceniti učinkovitost nadzorovanih in nenadzorovanih režimov vadbe za mobilnost hrbtenice, pri čemer smo udeležence razdelili na eksperimentalno (n=7) in kontrolno (n=7) skupino. Udeleženci so bili mladi moški in ženske delovno sposobne populacije (n=14). Kontrolni skupini smo pokazali vaje za izboljšanje gibljivosti hrbtenice in jih nato izvajali samostojno doma. Nasprotno pa se je eksperimentalna skupina vključila v svoj režim vadbe s programsko opremo Kemtai, platformo, zasnovano za zagotavljanje povratnih informacij in navodil v realnem času, s čimer je zagotovilo pravilno izvajanje vaj doma. Temeljito smo beležili napredek udeležencev v obeh skupinah, izvedli obsežne meritve na začetku in po 4 ter 8 tednih, da bi ocenili vpliv posamezne metode na gibljivost hrbtenice.

Rezultati: Po 4 in 8 tednih posebnega režima vadbe je prišlo do pomembnega in stalnega izboljšanja torakalne ekstenzije v obeh skupinah (eksperimentalna skupina torakalne ekstenzije I je bila $24,211,3 \pm SD$, po 4 tednih $27,110,7 \pm SD$, po 8 tednih $2910,2 \pm$; kontrolna skupina torakalne ekstenzije I je bila $12,83,9 \pm SD$, po 4 tednih $175,3 \pm$, po 8 tednih $21,48,2 \pm SD$), kar poudarja učinkovitost režima pri izboljšanju tega posebnega vidika gibi hrbtenice. Medtem ko druge izmerjene spremenljivke (torakalna rotacija, aktivno dvigovanje ravnih nog, konice prstov do tal, aktivno iztegotvanje kolen, ledvena fleksija/ekstenzija in torakalna fleksija) po 4 tednih niso pokazale bistvenih sprememb, kar nakazuje na ciljno učinkovitost vaj ali potrebo po daljše obdobje za opazovanje opaznih izboljšav na teh področjih, trajno izboljšanje prsnega koša po 8 tednih krepi pozitiven učinek vaj na zdravju hrbtenice.

Razprava in zaključki: Naše raziskave poudarjajo učinkovitost vadbene platforme Kemtai, ki posebej cilja na razširitev prsnega koša in gibljivost hrbtenice prek prilagojenih vadb. To kaže, da Kemtai obljublja kot uporaben vir za delovno sposobne posameznike, ki iščejo priročne metode za izboljšanje gibljivosti hrbtenice in splošnega fizičnega zdravja v svojih domovih.

Ključne besede: AI, vadba, mobilnost

Enhancing Spinal Mobility through Personalized AI-Powered Exercise: A Comparative Study of Kemtai Software Effectiveness

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Introduction: Kemtai is an exercise platform that employs AI and computer vision to track users' movements, offering personalized workouts and feedback. It features various exercise programs tailored to users' fitness levels and goals, aiming to enhance home workouts' effectiveness and motivation by providing interactive support and progress monitoring.

Method: In our study, we aimed to evaluate the effectiveness of supervised versus unsupervised exercise regimens for spinal mobility, dividing participants into an experimental (n = 7) and control (n = 7) group. Participants were young men and women of working-age population (n=14). The control group was shown exercises aimed at improving spine mobility and then performed these exercises independently at home. In contrast, the experimental group engaged in their exercise regimen using Kemtai software, a platform designed to offer real-time feedback and guidance, thereby ensuring exercises were performed correctly at home. We thoroughly recorded the progress of participants in both groups, conducting comprehensive measurements baseline and after 4 and 8 weeks to assess the impact of each method on spine mobility.

Results: After 4 and 8 weeks of a specific exercise regimen, there was a significant and continued improvement in thoracic extension in both groups (experimental group thoracic extension I was 24.2+/- 11.3 SD, after 4 weeks 27.1+/-10.7 SD, after 8 weeks 29+/-10.2; control group thoracic extension I was 12.8+/-3.9 SD, after 4 weeks 17+/-5.3, after 8 weeks 21.4+/-8.2 SD), underscoring the regimen's effectiveness in enhancing this particular aspect of spine movements. While other measured variables (thoracic rotation, active straight leg raise, fingertips to floor, active knee extension, lumbar flexion/ extension and thoracic flexion) did not show significant changes after 4 weeks, suggesting either the targeted effectiveness of the exercises or the necessity for a longer duration to observe notable improvements in those areas, the sustained improvement in thoracic extension after 8 weeks reinforces the positive impact of the exercises on spinal health.

Conclusion: Our research highlights the efficacy of the Kemtai exercise platform, specifically targeting thoracic extension and spine mobility via customized workouts. This indicates Kemtai's promise as a useful resource for working-age individuals seeking convenient methods to improve spine mobility and overall physical health in their own homes.

Keywords: AI, exercise, mobility

Vpliv opravljanja nočnega dela na prehrabne navade delavcev

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Uvod: Pri določenih poklicih je potrebna stalna pripravljenost in delo v izmenah, zato so nočne izmene neizogibne in nujno potrebne. Potek takega dela je velikokrat tudi zelo stresn, zahteva pa tudi veliko mero zbranosti od zaposlenih. Z izvajanjem nočnega dela pride do menjave dneva za noč, kar v telesu privede do mnogih sprememb, ki nočnim delavcem lahko poslabšajo samo kvaliteto in standard življenja. Tako nočno delo, zaradi spremenjenega ritma spanja in spremenjenega hranjenja lahko poveča tveganje za številne zdravstvene problem in stanja.

Metode: Pri pripravi članka nas je zanimala povezava med opravljanjem nočnega dela in prehranjevanjem delavcev v času nočne izmene. S tem namenom smo v podatkovni bazi PubMed z uporabo ključnih besed »prehrana«, »nočno delo«, »delavci«, »prehrana na delovnem mestu« poiskali znanstveno literaturo, objavljeno v obdobju od leta 2018 do leta 2023. Kot kriterij iskanja smo upoštevali še dostopnost celotnega besedila članka ter iskanje člankov v angleščem jeziku.

Rezultati: S pravilno prehrano in ustreznim prehranjevanjem na delovnem mestu lahko vplivamo na produktivnost, zmanjšuje utrujenost in izboljša koncentracijo na delovišču, omogoča nam bolj uspešno in kakovostno izvajanje nalog. Aktivna delovna populacija je glede na prehranjevalne navade na delovnem mestu ogrožena skupina. V raziskavi smo ugotovili, da, imajo delavci, ki delajo nočne izmene glede prehrane neurejen ritem prehranjevanja, nizek vnos sadja in zelenjave, visok energijski vnos neustreznih hranil, previsok delež sladkorja ter soli v prehrani na delovnem mestu. Raziskani članki navajajo tudi hormonske motnje, povečano subjektivno lakoto, želodčne težave in povečano zaspanost delavcev, ki opravljajo izmensko delo. Izkazalo se je, da bi bilo dobro uvajati in sprejeti nove zdrave prehranjevalne navade v službenem okolju.

Razprava in zaključki: Izpolnitev pogojev, kot so uravnotežena prehrana, zadostna količina spanca, skrb glede duševnega stanja, zadostna količina telesne aktivnosti so eden ključnih dejavnikov pri zagotavljanju dobre koncentracije ter zadostne količine energije za delo. Pravilna prehrana na delovnem mestu v nočnem času, ko zaposlen opravlja svoje delo ima velik vpliv tudi na počutje in zdravje delavcev. Na tem področju bi bilo potrebno opraviti še kakšno raziskavo v povezvi opravljanja nočnega in izmenskega dela ter samega vpliva na kakovost življenja delavcev. Pri takih vrstah izobraževanj je dobro izvajati multidisciplinarno sodelovanje strokovnjakov s večjih področij dela, kot so področja prehrane, gibanja in medicine.

Ključne besede: prehrana, nočno delo, delavci, prehrana na delovnem mestu

The influence of night work on the eating habits of workers

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Introduction: Certain professions require constant readiness and shift work, so night shifts are inevitable and necessary. The course of such work is often very stressful and requires a great deal of concentration from the employees. Performing night work causes to employees that can changes day to night, which leads to many changes in the body and can worsen the quality and standard of life. Work at night can increase the risk of many health problems and conditions due to a changed sleep rhythm and a changed diet.

Methods: In the article, we were interested in the connection between performing night work and the nutrition of workers during the night shift. For searching, we used the PubMed database using the keywords “nutrition”, “night work”, “workers”, “nutrition at the workplace” for scientific literature published in the period from 2018 to 2023. As search criteria, we considered accessibility of the full text of the article and searching for articles in English.

Results: With proper nutrition and adequate nutrition at the workplace, we can influence productivity, reduce fatigue and improve concentration at the workplace, enabling us to perform tasks more successfully and with high quality. The active working population is a group at risk in terms of eating habits at the workplace. In the research, we found that workers who work in shifts especially night shifts have a disordered eating rhythm, low intake of fruits and vegetables, high energy intake of inadequate nutrients, and too high a proportion of sugar and salt in the diet. Researched articles also describe hormonal disturbances, increased subjective hunger, stomach problems and increased sleepiness in shift workers. It turns out that it would be very good to introduce and adopt new healthy eating habits in the work environment.

Discussion and conclusions: Fulfillment of conditions such as a balanced diet, sufficient amount of sleep, concern about mental state, sufficient amount of physical activity are one of the key factors in ensuring good concentration and sufficient amount of energy for work. Proper nutrition at the workplace during the shifts and in night shifts, when the employee is doing his work, also has a great impact on the well-being and health of the workers. In this area, it would be necessary to carry out some more research into the connection between night and shift work and its impact on the quality of life of workers. In such types of training, it is good to implement multidisciplinary cooperation of experts from major fields of work, such as the fields of nutrition, exercise and medicine.

Keywords: nutrition, night work, workers, nutrition at the workplace

Odpornost in dobro počutje zaposlenih v nujni medicinski pomoči: večdimenzionalni kvalitativni pristop

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Uvod: Zaposleni v predbolnišnični nujni medicinski pomoči se med delom soočajo s številnimi izzivi. Izpostavljeni so številnim stresnim dogodkom in različnim drugim dejavnikom, kar lahko pomembno vpliva na njihovo zdravje in splošno dobro počutje. Glavni cilj raziskave je bil raziskati potencialne rešitve, namenjene izboljšanju dobrega počutja zaposlenih z njihove perspektive.

Metode: Uporabljena je bila kvalitativna, deskriptivna interpretativna metoda. Podatki so bili zbrani z individualnimi intervjuji, izvedenimi na daljavo. Intervjuji so bili opravljeni na Hrvaškem med februarjem in aprilom 2022. V namenski vzorec je bilo vključenih 26 zaposlenih v predbolnišnični nujni medicinski pomoči. Podatki so bili analizirani z metodo analize vsebine.

Rezultati: Identificiranih je bilo pet glavnih tem: (1) sistemi za podporo duševnemu zdravju; (2) ergonomske intervencije in intervencije na področju telesnega zdravja; (3) optimalno načrtovanje izmen in strategije okrevanja; (4) podpora in spremembe življenjskega sloga; (5) organizacijske strategije za dobro počutje. Zaposleni menijo, da je za izboljšanje njihovega dobrega počutja potrebno uvesti posebne ukrepe, ki smo jih opredelili v podtemah vsake glavne teme. Med predlaganimi intervencijami so poleg ergonomskih prilagoditev v reševalnih vozilih, programov telesne pripravljenosti in usposabljanj za preprečevanje poškodb z namenom obravnave težav v zvezi z duševnim zdravjem tudi izvajanje storitev podpore in svetovanja na področju duševnega zdravja, delavnic za obvladovanje stresa in usposabljanja za odpornost. Poleg omenjenega, poudarjajo pomen optimalnega razporejanja izmen, izobraževanja o higieni spanja ter protokolov za počitek in okrevanje, da bi ublažili škodljive učinke dolgih urnikov in neenakomerno razporejenega delovnega časa na njihovo splošno dobro počutje. Prav tako se zavzemajo za prehransko svetovanje, fitnes programe in vzpostavitev socialnih podpornih mrež za spodbujanje zdravega življenjskega sloga. Zaposleni, med drugim poudarjajo pomen okrepljenih organizacijskih politik, programov za spodbujanje zdravja in dostopnosti virov, namenjenih dobremu počutju v njihovem delovnem okolju.

Razprava in zaključki: Ugotovitve poudarjajo pomemben vpliv dolgotrajnega dela v službah predbolnišnične nujne medicinske pomoči na dobro počutje zaposlenih ter pomen preusmeritve pozornosti iz identifikacije prisotnih problematik na praktično izvajanje proaktivnih ukrepov. Slednji bi morali biti po namenjeni krepitvi njihove odpornosti in dobrega počutja, kar pomembno prispeva k bolj zdravemu in trajnostno naravnemu delovnemu okolju.

Gljučne besede: Predbolnišnična nujna medicinska pomoč, promocija zdravja, poklicno zdravje

Resilience and well-being among ambulance personnel: A multidimensional qualitative approach

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Introduction: Ambulance personnel face a multitude of challenges while on duty, including exposure to stressful events and various factors within outpatient emergency medical service, which can significantly impact their health and overall well-being. Recognizing the importance of addressing these challenges, the main objective of this study was to explore potential solutions aimed at enhancing the well-being of ambulance personnel from their perspective.

Methods: A qualitative, descriptive interpretative research design was used, involving individual face-to-face and online interviews with ambulance personnel conducted between February and April 2022 in Croatia. The purposive sample included 26 ambulance personnel. The data was analysed using a method of content analysis.

Results: Five main themes emerged from our data: (1) Mental health support systems; (2) Ergonomic and physical health interventions; (3) Optimized shift scheduling and recovery strategies; (4) Lifestyle support and modifications; (5) Organizational strategies for well-being. Ambulance personnel believe that introducing specific interventions is necessary to improve their well-being, as outlined within the subthemes identified for each topic. Among the proposed interventions are the implementation of mental health support and counselling services, stress management workshops, and resilience training to address mental health concerns, alongside ergonomic adjustments in ambulances, physical fitness programs, and injury prevention training. Furthermore, ambulance personnel emphasize the importance of optimized shift scheduling, sleep hygiene education, and rest and recovery protocols to mitigate the detrimental effects of long and irregular work hours on their overall well-being. They also advocate for nutritional guidance, fitness programs, and the establishment of social support networks to encourage healthy lifestyle choices. Moreover, they highlight the significance of enhanced organizational policies, health promotion programs, and resources dedicated to well-being within their workplace environment.

Discussion and conclusions: The findings underscore the significant impact of long-term work in emergency medical services on the well-being of ambulance personnel. Moreover, they highlight the importance of shifting the focus from problem identification to implementing proactive measures aimed at supporting resilience and well-being of ambulance personnel. In conclusion, this study emphasized the need for proactive measures to address the well-being of ambulance personnel. By prioritizing the implementation of solutions identified through this research, organizations can better support the resilience and overall well-being of their employees, ultimately fostering a healthier and more sustainable work environment.

Keywords: Emergency medical services, health promotion, occupational health

Stopnje telesne aktivnosti in indeks telesne mase na vzorcu delovno aktivnih odraslih

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Uvod: Stopnja telesne dejavnosti in indeks telesne mase (ITM) sta pomembna kazalca zdravja in dobrega počutja, zlasti med delovno aktivnim prebivalstvom. Vprašalnik Baecke se običajno uporablja za ocenjevanje ravni telesne dejavnosti na različnih področjih, medtem ko ITM zagotavlja vpogled v prehranski status. Namen te študije je bil raziskati razmerje med stopnjami telesne aktivnosti, merjeno z Baeckejevim vprašalnikom, in ITM na vzorcu delovno aktivnih posameznikov.

Metode: Vzorec je vključeval 40 delovno aktivnih posameznikov (povprečna starost 20,29 let). Udeleženci raziskave so izpolnili Baeckejev vprašalnik za samooceno stopnje telesne dejavnosti v prostočasni in športni dejavnosti v preteklem letu. ITM je bil izračunan s pomočjo formule, upoštevajoč višino in telesno maso. Podatki so predstavljeni kot povprečne vrednosti.

Rezultati: Rezultati so pokazali višje povprečne vrednosti indeksa prostega časa (3,09) v primerjavi z indeksom športa (2,56), kar kaže na večjo vključenost udeležencev v prostočasne dejavnosti. Vendar je bila najpogostejša vrednost, ki so jo dosegli člani skupine, višja pri športnem indeksu (3,5), kar kaže na pretežno ukvarjanje z organiziranim športom. Mediana ITM je bila 20,7, povprečne vrednosti ITM pa so se približale zgornji meji normalnih vrednosti (24,28), kar kaže na splošno ustrezno prehransko stanje udeležencev.

Razprava in zaključki: Ugotovitve poudarjajo zapletenost vzorcev telesne dejavnosti med delovno sposobnim prebivalstvom, pri čemer posamezniki kažejo mešanico dejavnosti v prostem času in s športom. Pretežno ukvarjanje z organiziranim športom kaže na potencialne koristi za telesno pripravljenost in zdravje. Poleg tega rezultati ITM kažejo na ustrezen prehranski status v skupini. Na splošno te ugotovitve poudarjajo pomen spodbujanja telesne dejavnosti in zdrave prehrane med delovno sposobnim prebivalstvom za podporo optimalnega zdravja in dobrega počutja. Nadaljnje raziskave so potrebne za raziskovanje dolgoročnih posledic teh ugotovitev in razvoj ciljno usmerjenih intervencij za izboljšanje zdravstvenih rezultatov v tej demografski skupini.

Gljučne besede: Baeckejev vprašalnik, šport, prosti čas

Physical Activity Levels and Body Mass Index in a sample of Working-Age Population

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Introduction: Physical activity levels and body mass index (BMI) are important indicators of health and well-being, particularly among the working-age population. The Baecke questionnaire is commonly used to assess physical activity levels across various domains, while BMI provides insight into nutritional status. This study aimed to investigate the relationship between physical activity levels, as measured by the Baecke questionnaire, and BMI in a sample of working-age individuals.

Methods: A sample of 40 working-age (mean age 20.29 years) individuals was recruited for the study. Participants completed the Baecke questionnaire to assess physical activity levels, focusing on the leisure and sports indices. BMI was calculated using standard height and weight measurements. Data were analyzed to determine average scores for the leisure and sports indices, as well as mean and mode BMI values for the group.

Results: The results revealed higher average values for the leisure index (3.09) compared to the sports index (2.56), indicating greater engagement in leisure activities among participants. However, the most frequent value achieved by group members was higher on the sports index (3.5), suggesting predominant involvement in organized sports. Median BMI value was 20.7 and mean BMI values approached the upper limit of normal values (24.28), indicating overall adequate nutritional status.

Discussion and Conclusions: The findings highlight the complexity of physical activity patterns among the working-age population, with individuals showing a mix of leisure and sports-related activities. The predominant engagement in organized sports suggests potential benefits for physical fitness and health. Additionally, the BMI results indicate generally adequate nutritional status within the group. Overall, these findings underscore the importance of promoting both physical activity and healthy nutrition among the working-age population to support optimal health and well-being. Further research is warranted to explore the long-term implications of these findings and to develop targeted interventions for improving health outcomes in this demographic.

Keywords: Baecke questionnaire, sport, leisure

Samoocena ustnega zdravja pri odraslih v Sloveniji v 2019

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Uvod: Samoocena ustnega zdravja je subjektiven, a pomemben kazalnik ustnega zdravja posameznika. Namen raziskave je bil ugotoviti raven samoocene ustnega zdravja v Sloveniji.

Metode: »Nacionalna raziskava o ustnem zdravju odraslih v Sloveniji leta 2019« je bila izvedena na vzorcu 3.200 odraslih prebivalcev Slovenije, starih med 18 in 74 let. Sodelujoči so po pošti prejeli povabilo za sodelovanje v spletni anketi, starejšim od 44 let smo ob obvestilnem pismu priložili še pisno obliko vprašalnika. Področje samoocene ustnega zdravja je bilo ocenjeno s pomočjo vprašanja: »Kako ocenjujete svoje ustno zdravje?«, možni odgovori so bili: »Zelo dobro.«, »Dobro.«, »Srednje.«, »Slabo.«, »Zelo slabo.«. Za potrebe statistične analize smo združili skrajne kategorije. Podatke smo analizirali glede na demografske podatke. Porazdelitve deležev med različnimi skupinami (po spolu, starosti, izobrazbi in bivalnem okolju) smo testirali s testom hi-kvadrat in testom CCP (angl. Column Comparison Proportion test) za primerjavo deležev med različnimi skupinami.

Rezultati: Svoje ustno zdravje pozitivno ocenjuje 60 % oseb, med njimi 12 % oseb kot »zelo dobro«. Kot »slabo« ali »zelo slabo« svoje ustno zdravje ocenjuje 8 % oseb. Ustno zdravje pozitivno ocenjuje 62 % žensk, medtem ko je takšnih med moškimi 57 %. Obratno je delež tistih, ki svoje ustno zdravje ocenjujejo negativno, višji med moškimi kot med ženskami (10 % proti 6 %), razlika je statistično značilna (test CCP, $p = 0,021$). Delež oseb, ki svoje ustno zdravje ocenjujejo negativno, je najnižji med odraslimi z najvišjo izobrazbo (8 % odraslih z največ osnovnošolsko izobrazbo, 10 % odraslih s srednješolsko izobrazbo in 4 % odraslih z najmanj višješolsko izobrazbo).

Razprava in zaključki: Samoocena ustnega zdravja je povezana s socioekonomskimi dejavniki, kot so spol, izobrazba in bivalno okolje. Raven ustnega zdravja odraslih prebivalcev Slovenije, izhajajoč iz samoocene, ni visoka. Nezanemarljiv delež odraslih v Sloveniji namreč svoje ustno zdravje ocenjuje negativno, kar predstavlja pomemben problem. Glede na ugotovljeno prevalenco negativne samoocene ustnega zdravja lahko ocenimo, da je ob več kot 117.000 oseb, ki negativno ocenjujejo svoje ustno zdravje, tudi več kot 480.000 takih, ki svoje ustno zdravje ocenjujejo kot »srednje«. Za njih lahko upravičeno predvidevamo, da imajo občasne težave z ustnim zdravjem. Delež oseb, ki svoje ustno zdravje ocenjujejo negativno, je višji med moškimi, med starejšimi od 45 let, med nižje izobraženimi (največ osnovnošolska izobrazba) in med tistimi, ki živijo v vaškem okolju. Te skupine lahko izpostavimo kot bolj ranljive z vidika ustnega zdravja. Pri ohranjanju in krepitvi ustnega zdravja ima ključno vlogo primerna skrb za ustno zdravje. Neredno čiščenje zob in neredni obiski pri zobozdravniku vodijo v nastanek bolezni v ustni votlini, bolečine, nelagodje in v skrajnem primeru v izgubo zob z vsemi posledicami, ki jih to stanje prinaša. Omenjene skupine so tudi tiste, h katerim je potrebno v prihodnje usmeriti preventivne aktivnosti.

Ključne besede: ustno zdravje, samoocena ustnega zdravja, raziskave ustnega zdravja, ustna higiena, skrb za ustno zdravje

Self-assessment of the oral health of adults in Slovenia in 2019

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Introduction: Self-assessment of oral health is a subjective but important indicator of an individual's oral health. The aim of the study was to determine the level of self-assessed oral health in Slovenia.

Methods: The »National Oral Health Survey of Adults in Slovenia in 2019« was conducted on a sample of 3,200 adult residents of Slovenia aged between 18 and 74 years. Participants received an invitation to participate in the online survey by post, and a written questionnaire was enclosed with the notification letter for people over 44 years of age. The self-assessment of oral health was evaluated using the question: »How do you rate your oral health?«, possible answers were: »Very good«, »Good«, »Fair«, »Poor«, »Very poor«. The extreme categories were combined for the statistical analysis. The data were analysed according to demographic data. We tested the distributions of proportions between different groups (by gender, age, education and living environment) using the chi-square test and the Column Comparison Proportion (CCP) test to compare proportions between different groups.

Results: 60% of respondents rated their oral health positively, 12% of whom rated it as »very good«. 8% of respondents rated their oral health as »poor« or »very poor«. 62% of women rated their oral health positively, compared to 57% of men. Conversely, the proportion of those who rated their oral health negatively was higher among men than women (10% compared to 6%); the difference is statistically significant (CCP test, $p=0.021$). The proportion of people who rated their oral health negatively was lowest among adults with the highest level of education (8% of adults with at least primary education, 10% of adults with secondary education and 4% of adults with at least tertiary education).

Discussion and conclusions: Self-assessed oral health is related to socioeconomic factors such as gender, education and living environment. The level of oral health of Slovenian adults, based on self-assessment, is not high. A significant proportion of adults in Slovenia rate their oral health negatively, which is a major problem. Given the observed prevalence of negative self-assessment of oral health, it can be estimated that in addition to the more than 117,000 people who rate their oral health negatively, there are also more than 480,000 who rate their oral health as »fair«. It can be assumed that they occasionally have problems with their oral health. The proportion of people who rate their oral health negatively is higher among men, people over the age of 44, people with a lower level of education (mainly primary education) and people living in rural areas. These groups can be considered particularly vulnerable in terms of oral health. Adequate oral health care plays a key role in maintaining and strengthening oral health. Inadequate frequency of tooth brushing and irregular visits to the dentist lead to the development of oral diseases, pain, discomfort and ultimately tooth loss with all its consequences. These are also the groups on which preventive measures should be focused in the future.

Keywords: oral health, oral health self-assessment, dental health surveys, oral hygiene, oral health care

Ozaveščenost o spolno prenosljivih boleznih med prebivalci Slovenije

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Uvod: Spolno prenosljive bolezni že stoletja vzbujajo veliko zaskrbljenost, saj veljajo za velik dejavnik tveganja obolelosti in umrljivosti ter ostajajo eden izmed problemov javnega zdravja doma in po svetu. Glede na to je pomembno pravočasno ozaveščanje prebivalstva in prepoznavanje spolno prenosljivih boleznih ter nudenje ustreznih informacij in zdravljenje. Namen raziskave je bil ugotoviti ozaveščenost in znanje prebivalstva Slovenije o spolno prenosljivih boleznih.

Metode: Za izdelavo teoretičnega dela je bila uporabljena deskriptivna metoda dela, katera je zajemala pregled znanstvenih monografij ter strokovnih in znanstvenih člankov. Uporabljeni iskalni pojmi so bili: spolno prenosljive bolezni, spolnost, medicinska sestra, spolno prenosljive bolezni. V nadaljevanju je bila uporabljena tehnika anketiranja, uporabili smo strukturiran instrument v obliki anketnega vprašalnika, ki je bil od aprila do junija 2023 objavljen na spletni strani www.lka.si. Vprašalnik je izpolnilo 141 prebivalcev obeh spolov, starih od 18 let ali manj do 56 let ali več. Zbrane podatke smo obdelali v programu Microsoft Excel. Pridobljene podatke smo statistično obdelali in prikazali v odstotkih ter jih primerjali med seboj.

Rezultati: Ugotovljeno je bilo, da imajo prebivalci Slovenije pomanjkljivo znanje o spolno prenosljivih boleznih. Anketirancem je najbolj znana spolno prenosljiva bolezen HIV ($n=128$, 12%), najmanj pa trihomoniaza ($n=25$, 2%), katera je v zadnjih letih v porastu prav tako kot ostale bolj poznane spolno prenosljive bolezni. Znanje o zaščiti pred spolno prenosljivimi boleznimi je zadovoljivo, saj se velik del anketirancev poslužuje primerne zaščite pred spolnim odnosom ($n=120$; 30%). Med anketiranci je bilo razvidno, da se nekateri ne zaščitijo in ne uporabljajo zaščite pred spolnim odnosom. Preprečevanje novo nastalih spolno prenosljivih boleznih je bistvenega pomena, zato smo anketirance povprašali tudi o pogostosti zaščite. Iz raziskave smo ugotovili, da se velik del anketirancev zmeraj zaščiti (43%), najmanj pa se jih zaščiti občasno ali zelo pogosto (11%).

Razprava in zaključki: Spolno prenosljive bolezni se delijo glede na povzročitelje in sicer na virusne, bakterijske, glivične in preostale povzročitelje (praživali in ektoparaziti). Skoraj vsem spolno prenosljivih boleznih je skupen način prenosa; ravno obratno pa je zdravljenje le teh, saj je osredotočeno na določeno spolno bolezen. Pozorni moramo biti na asimptomatske spolno prenosljive bolezni, saj se po podatkih zadnja leta spolno prenosljive bolezni odkrije po naključju, kar predstavlja slabšo prognozo za zdravljenje ter nadaljnjo obravnavo samega pacienta. Naloga medicinske sestre je na tem področju raznolika, saj je za samega pacienta ter potek zdravljenja bistvenega pomena.

Ključne besede: spolno prenosljive bolezni, ozaveščenost prebivalcev, vloga medicinske sestre

Awareness of sexually transmitted diseases among the population of Slovenia

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Introduction: Sexually transmitted diseases have been a major concern for centuries, as they are a major risk factor for morbidity and mortality and remain a public health problem at home and worldwide. In this context, it is important to raise awareness and identify sexually transmitted diseases in a timely manner, and to provide appropriate information and treatment. The aim of the survey was to determine the awareness and knowledge of the population of Slovenia about sexually transmitted diseases.

Methods: The descriptive method was used for the theoretical work, which included a review of scientific monographs and professional and scientific articles. The search terms used were: sexually transmitted diseases, sexuality, nurse, sexually transmitted diseases. The survey technique used was a structured instrument in the form of a questionnaire published on the website www.lka.si from April to June 2023, which was completed by 141 people of both sexes, aged 18 or under to 56 or over. The data collected were processed in Microsoft Excel. The data obtained were statistically processed and presented as percentages and compared with each other.

Results: The survey revealed that people in Slovenia have insufficient knowledge about sexually transmitted diseases. HIV is the most known sexually transmitted disease (n=128, 12%) and trichomoniasis is the least known (n=25, 2%), which has been on the rise in recent years, just like other more well-known sexually transmitted diseases. Knowledge about protection against sexually transmitted diseases itself is satisfactory, as a large proportion of respondents use adequate protection before *sexual intercourse* (n=120; 30%). Among the respondents, it was evident that some do not protect themselves and do not use protection before *sexual intercourse*. Prevention of newly emerging sexually transmitted diseases is essential, and we asked respondents about the frequency of protection against them. From the survey, we found that a large proportion of respondents always protect themselves (43%), while the lowest proportion sometimes or very often protect themselves (11%).

Discussion and conclusions: Sexually transmitted diseases are divided into viral, bacterial, fungal and residual agents (protozoa and ectoparasites) according to their causative agents. Almost all sexually transmitted diseases share a common mode of transmission; the opposite is true for their treatment, which focuses on a specific sexually transmitted disease. We need to pay attention to asymptomatic sexually transmitted diseases, as data show that in recent years sexually transmitted diseases have been detected incidentally, which represents a poorer prognosis for treatment and further management of the patient. The nurse's role in this area is varied, as it is essential for the patient and the course of treatment.

Keywords: sexually transmitted diseases, public awareness, role of the nurse

Potencialni viri okužb, povezanih z zdravstvom, v enoti intenzivne terapije

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Uvod: Okužbe povezane z zdravstvom (OPZ) so ene najpogostejših zapletov zdravstvene obravnave. Velika večina tovrstnih okužb je zabeleženih v enotah intenzivne terapije (EIT), kjer se pogosteje uporablja invazivne pripomočke, kot so endotrahealni tubus, žilni ter urinski katetri. Gre predvsem za bakterijske povzročitelje, pri katerih se beleži naraščajoč trend proti antibiotikom odpornih sevov. Namen študije je bil določiti številčnost mikroorganizmov v neposredni bližini pacientov in rokah zaposlenih na oddelku EIT ene izmed slovenskih bolnišnic.

Metode: Podatke smo zbrali s pomočjo eksperimentalne metode dela, pri kateri smo mikrobiološko vzorčili: roke zaposlenih pred izvajanjem jutranje nege; delovne obleke po končani izmeni; obposteljne mizice pred razkuževanjem; površino vozička za jemanje krvi vsaj tri ure po razkuževanju; ter s pomočjo sedimentacijske metode preverili mikrobiološko kakovost zraka pred prezračevanjem in čiščenjem prostora. Po vzorčenju smo vzorce dostavili v mikrobiološki laboratorij bolnišnice, kjer so jih obdelali po smernicah mednarodnega standarda pod številko ISO 15189. Bakterijske vrste so identificirali s pomočjo metode ionizacije v matriksu z desorpcijo z laserjem in masnim analizatorjem časa preleta ionov (MALDI-TOF).

Rezultati: V 45 vzorcih je poraslo skupno 65 bakterijskih vrst in en izolat pripadnika rodu gliv. Glede na raznolikost mikrobne združbe, se je najvišja pokazala v vzorčenem zraku, kjer smo našli kar 16 različnih vrst mikroorganizmov. Sledile so delovna obleka (n=14), roke zaposlenih (n=7) in obposteljna mizica (n=3). Na delovni površini vozička za jemanje krvi, pri uporabljenih pogojih, nismo potrdili prisotnosti živih mikroorganizmov. Izmed vseh odvzetih vzorcev smo v največ primerih potrdili koagulaza negativne stafilokoke, kot sta vrsti *Staphylococcus epidermidis* (v 15 od skupno 45 vzorcev) in *S. hominis* (12/45). Ostale vrste, ki smo jih potrdili v več kot 1.5 % vseh vzorcev so bile: *Priestia flexa* (5/45), *S. aureus* (4/45), *Micrococcus luteus* (3/45), *S. warneri* (3/45), *S. capitis* (3/45), *S. haemolyticus* (2/45), *B. cereus* (2/45) ter *Peanibacillus urinaris* (2/45). Pomembni bakterijski vrsti, iz vidika povzročiteljev OPZ, kateri smo identificirali samo enkrat sta *Klebsiella oxytoca* ter *Stenotrophomonas* spp.

Razprava in zaključki: S primerjavo evropskih in slovenskih presečnih študij smo prišli do ugotovitve, da smo identificirali vrste mikroorganizmov za katere so poročali, da so možni povzročitelji sepse v povezavi z žilnimi katetri, okužb sečil v povezavi z urinskim katetrom in pljučnic, povezanih z endotrahealnim tubusom. Ker smo v raziskavi izolirali možne povzročitelje OPZ, je smiselno, da podatke predstavimo zaposlenim in jih seznanimo, kateri mikroorganizmi so prisotni v njihovem delovnem okolju. Slednje lahko deluje na zaposlene kot motivacija za dosledno izvajanje standardnih ukrepov za preprečevanje prenosa povzročiteljev OPZ.

Gljučne besede: okužbe povezane z zdravstvom, preprečevanje okužb, intenzivni oddelek

Potential sources of nosocomial infections in the intensive care unit

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Introduction: Healthcare-associated infections (HCAs) pose a significant challenge in healthcare settings particularly in intensive care units (ICUs), where the frequent use of invasive devices like endotracheal tubes, intravascular, and urinary catheters increase the risk. These infections are mainly caused by bacteria, with a growing trend of antibiotic-resistant strains. The aim of the study was to determine the abundance of microorganisms in close proximity to patients and on the hands of healthcare personnel within the ICU of a Slovenian hospital.

Methods: Data were collected using an experimental approach, involving microbiological sampling of various surfaces: the hands of healthcare personnel prior to morning care; work clothing after the shift; bedside tables pre-disinfection; the surface of the blood collection trolley at least three hours post-disinfection; and the microbiological quality of the air before ventilation and room sanitation using a sedimentation method. Following sampling, the specimens were transferred to the hospital's microbiological laboratory and processed in accordance with the international standard ISO 15189. Bacterial species were identified using the matrix-assisted laser desorption/ionization time-of-flight mass spectrometer (MALDI-TOF) method.

Results: A total of 65 bacterial species and one fungal genus were identified in 45 samples. The highest diversity of microbial community was observed in the air, where we found 16 different species of microorganisms. This was followed by work clothing (n=14), personnel hands (n=7), and bedside table (n=3). There were no microorganisms detected on the working surface of the blood collection trolley. Among all samples, coagulase-negative staphylococci were the most frequently detected, including *Staphylococcus epidermidis* (in 15 out of 45 samples) and *S. hominis* (12/45). Other species detected in more than 1.5% of all samples were: *Priestia flexa* (5/45), *S. aureus* (4/45), *Micrococcus luteus* (3/45), *S. warneri* (3/45), *S. capitis* (3/45), *S. haemolyticus* (2/45), *B. cereus* (2/45), and *Peñibacillus urinaris* (2/45). Notably, two important bacterial species in terms of HCAI were also identified: *Klebsiella oxytoca* and *Stenotrophomonas* spp.

Discussion and Conclusion: Through a comparison to European and Slovenian cross-sectional studies, we have identified microorganisms that were implicated as possible causes of sepsis associated to vascular catheters, urinary tract infections associated with urinary catheters, and pneumonia associated with endotracheal tubes. Given the isolation of potential pathogens associated with HCAI in our study, it is important to share these results to the healthcare personnel and educate them about the microorganisms present in their work environment. Furthermore, these findings can serve as a motivation to consistently adhere to standard protocols aimed at preventing the transmission of HCAI pathogens.

Keywords: healthcare-associated infections, infection prevention, intensive care unit

Vpliv podnebnih sprememb na zdravje starejših odraslih: vloga medicinskih sester

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Izhodišča in namen: Podnebne spremembe predstavljajo vse izrazitejšo grožnjo globalnemu zdravju, še posebej prizadenejo starejše odrasle. Ta članek poudarja ključno vlogo medicinskih sester pri soočanju z vse večjim izzivom prilagajanja zdravstvene nege.

Predstavitev vsebine: Odzivi starejših odraslih na podnebne spremembe izhajajo iz večplastnega nabora dejavnikov, ki zajemajo fiziološke procese staranja, sociodemografske značilnosti in geografske razmere. Ključni koraki pri prilagajanju zdravstvene nege vključujejo prepoznavanje zdravstvenih težav, povezanih s podnebnimi spremembami, prilagajanje strategij zdravstvene nege za ublažitev povečanih tveganj, povezanih s podnebjem, širjenje zgodnjih opozorilnih informacij o vremenskih dogodkih in napovedovanje izbruhov bolezni, ki jih povzroča vreme. Poleg tega je nujno določiti posameznike, ki so najbolj izpostavljeni ali dovzetni za učinke podnebnih sprememb, ter izvajati izobraževalne pobude za ozaveščanje starejših in širše javnosti o preventivnih ukrepih. Predvsem je raziskav o odnosu medicinskih sester do podnebnih sprememb malo ali jih sploh ni, kar ovira naše razumevanje njihovega dožemanja tega vprašanja. Izobraževalni programi pogosto spregledajo vpliv podnebnih sprememb in poudarjajo potrebo po nenehnem izboljševanju teh programov, da se zagotovi ustrezna priprava za zagotavljanje oskrbe v spreminjajoči se podnebni pokrajini. Vključevanje informacij o zdravstvenih posledicah podnebnih sprememb za starejše v rutinske prakse zdravstvene nege ter zagovarjanje politik in praks, katerih cilj je zmanjšati ranljivost starejših za vplive podnebnih sprememb, sta ključna sestavna dela tega prizadevanja.

Sklepne ugotovitve: Aktivno sodelovanje je nepogrešljivo pri obravnavanju globalnih zdravstvenih izzivov, ki jih prinašajo podnebne spremembe. Kljub zapletenosti posledic podnebnih sprememb lahko medicinske sestre in zdravstveni delavci oblikujejo pristope oskrbe bolnikov, ki obravnavajo s podnebjem povezana tveganja in spodbujajo zdravje starejših odraslih. S temi prizadevanji se je mogoče izogniti nujnim medicinskim posegom in hospitalizacijam ter zmanjšati tveganje resnih zdravstvenih zapletov.

Ključne besede: podnebne razmere, starejši odrasli, zdravstvena nega

The Impact of Climate Change on the Health of the Elderly: The Role of Nurses

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Introduction and purpose: Climate change poses an increasingly pronounced threat to global health, particularly affecting the elderly. This paper underscores the pivotal role of nurses in confronting the escalating challenge of nursing care adaptation.

Content presentation: Older individuals' responses to climate change stem from a multifaceted array of factors, encompassing physiological aging processes, sociodemographic characteristics, and geographic conditions. Vital steps in nursing care adaptation entail identifying health issues linked to climate change, adjusting nursing care strategies to mitigate heightened climate-related risks, disseminating early warning information about weather events, and forecasting weather-induced disease outbreaks. Moreover, it is imperative to pinpoint individuals with the highest exposure or susceptibility to climate change effects and implement educational initiatives to raise awareness among the elderly and the general public about preventive measures. Notably, research on nurses' attitudes toward climate change is scarce or nonexistent, hindering our comprehension of their perceptions of this issue. Education programs often overlook the impact of climate change, underscoring the need for continual enhancement of these programs to ensure adequate preparation for delivering care in a shifting climate landscape. Integrating information on the health implications of climate change for the elderly into routine nursing practices and advocating for policies and practices aimed at reducing the vulnerability of the elderly to climate change impacts are pivotal components of this endeavor.

Conclusions: Active engagement is indispensable in addressing the global health challenges posed by climate change. Despite the complexity of climate change consequences, nurses and healthcare professionals can devise patient care approaches that address climate-related risks and promote the health of older adults. Through these endeavors, it is plausible to circumvent emergency medical interventions, and hospitalizations, and mitigate the risk of severe health complications.

Keywords: climate change, elderly, nursing care

Zdravje delovno aktivnih in starejših odraslih

Health of Working-Age and Older Adults

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