



# ZDRAVJE OTROK IN MLADOSTNIKOV

## HEALTH OF CHILDREN AND ADOLESCENTS

**Zbornik  
povzetkov z recenzijo  
Book of Abstracts**

Edited by  
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Boštjan Žvanut, Patrik Pucer, Mariza Bulič**



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*zdravje otrok in mladostnikov*  
health of children and adolescents



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# Zdravje otrok in mladostnikov Health of children and adolescents

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*3. znanstvena in strokovna konferenca  
z mednarodno udeležbo  
3<sup>rd</sup> scientific and professional  
international conference*

*Zbornik povzetkov z recenzijo  
Book of Abstracts*





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THANKS TO OUR CONFERENCE SPONSORS**

## **Uvodne misli**

## **Preface**

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# Zdravje otrok in mladostnikov

## Skrb za otroke in mladostnike predstavlja temelj zdravja družbe

Navede in vzorci vedenja, povezani z zdravjem, ki se razvijejo v otroštvu, nas spremljajo vse življenje. Zato je pomembno, da skrb za zdrav živiljenjski slog privzgojimo že v otroštvu, saj je ravno uvajanje in vzdrževanje zdravih živiljenjskih navad najboljše preventivno vedenje zoper pojav številnih bolezni in obolenj. Konvencija Združenih narodov o otrokovih pravicah uteviljuje pravico vsakega otroka do »najvišje dosegljive ravni zdravja«, temu sledi Strategija Svetovne zdravstvene organizacije za zdravje in razvoj otrok in mladostnikov ter številne nacionalne strategije, ki podpirajo skrb za zdravje omenjene populacije. Skupina otrok in mladostnikov do 19 let v letu 2019 predstavlja 19,5 % prebivalcev Slovenije.

S predstavitvijo najnovejših znanstvenih in strokovnih prispevkov želimo v pričojoči publikaciji povečati ozaveščenost na področju zdravja in dobrega počutja otrok in mladostnikov. Avtorji prispevkov in aktivni udeleženci konference predstavljajo najnovejše študije in izvirne primere dobrih praks s poudarkom na naslednjih tematskih sklopih: (1) psihosocialno zdravje v otroštvu in mladosti; (2) prehrana otrok in mladostnikov; (3) informacijsko-komunikacijske tehnološke rešitve in storitve za zdravje otrok in mladostnikov; (4) otrok in mladostnik – okolje ter (5) gibalna (ne)aktivnost otrok in mladostnikov. Publikacija je namenjena raziskovalcem, visokošolskim učiteljem, študentom, strokovnjakom na področju zdravstva ter vzgoje in izobraževanja ter vsem, ki se zanimalo za dobro počutje otrok in mladostnikov. Objavljeni povzetki in prispevki podajajo morebitne smernice in rešitve, ki na področju zdravja otrok in mladostnikov nakazujejo na inovativne pristope in povečujejo možnosti izbire ustreznih, zdravju koristnih navad na vseh področjih družbenih aktivnosti in v različnih okoljih.

Letošnja konferenca zaokroža triletni cikel konferenc Univerze na Primorskem, Fakultete za vede o zdravju, povezanih z zdravjem različnih starostnih skupin. Želimo si, da bodo predstavljene teme in prispevki poglobili znanje poslušalcev ter prispevali k ozaveščanju javnosti o pomenu zdravja otrok in mladostnikov. Ob koncu vas vladljivo vabimo v 2020 na naslednjo konferenco, katere osrednja tema bo zdravje delovno aktivne populacije.

# Health of Children and Adolescents

## Caring for children and adolescents is a cornerstone of society's health

Habits and patterns of health-related behaviours, developed in childhood, become part of our lives. It is therefore important to integrate a healthy lifestyle from childhood on since the introduction and health-related behavioural represent the best prevention against a variety of illnesses and diseases. The United Nations Convention on the Rights of the Child, as well as the World Health Organization's strategies on child and adolescent health and different national strategies related to health care of the aforementioned population, justifies that each child has the right to the "highest possible level of health". According to data from 2019, children and adolescents of maximum 19 years of age, represent 19.5 % of the populations in Slovenia.

This conference proceeding aims to raise awareness in the field of child and adolescent health and well-being by presenting the latest professional or scientific conference contributions. Authors and active conference participants present recent studies and original best practices, by focusing on the following topics: (1) psychosocial health in childhood & youth; (2) nutrition of children and adolescents; (3) information and communication technology (ICT) solutions and services for the health of children and adolescents; (4) child and adolescent – environment; (5) physical (in)activity of children and youth. The publication is intended for researchers, higher education teachers, students, experts in the field of education and healthcare, interested in the well-being of children and adolescents. Published abstracts and papers in the field of healthcare of children and adolescents represent potential innovative approaches and increase the possibility to select the most appropriate healthy options in different social activities in a variety of environments.

This year's conference summarizes the three-year cycle of conferences of the University of Primorska, Faculty of Health Sciences related to the health of different age groups. Our ambition is that the introduced topics and contributions increased the knowledge of the participants and contribute to the raising of public awareness regarding the importance of child and adolescents health. Finally, we kindly invite you in 2020 to the next conference, which will focus on the health of the working-age population.



# **Program konference Conference Programme**

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<b>7.30–8.30</b>	<b>Registracija udeležencev Registration</b> <i>Avla dvorane Galea Galea's Foyer</i>	Namestitev posterjev Poster posting
<b>8.30–9.35</b>	<b>Otvoritev in plenarna predavanja, 1. del Opening and plenary lectures 1<sup>st</sup> part</b> <i>Dvorana Galea, pritličje Galea Hall, Groundfloor</i>	
<b>9.35–10.00</b>	<b>Odmor s kavo Coffee break</b> <i>Avla dvorane Galea Galea's Foyer</i>	Namestitev posterjev Poster posting
<b>10.00–13.00</b>	<b>Sekcije, 1. del Sections 1<sup>st</sup> part</b>  <b>STROKOVNI PRISPEVKI PROFESSIONAL ABSTRACTS</b>  <b>Sekcija OTROK IN MLADOSTNIK – OKOLJE</b> <b>Section CHILD AND ADOLESCENT - ENVIRONMENT</b>  <i>Dvorana Galea Galea Hall</i>	<b>ZNANSTVENI PRISPEVKI SCIENTIFIC ABSTRACTS</b>  <b>Sekcija PSIHOSOCIALNO ZDRAVJE V OTROŠTVU IN V MLADOSTI</b> <b>Section PSYCHOSOCIAL HEALTH IN CHILDHOOD &amp; YOUTH</b>  <i>Dvorana Batana Batana Hall</i>
<b>13.00–14.00</b>	<b>Odmor s kosilom Lunch</b> <i>Restavracija GH Portorož Restaurant of GH Portorož</i>	
<b>14.00–15.15</b>	<b>Plenarna predavanja, 2. del Plenary lectures 2<sup>nd</sup> part</b> <i>Dvorana Galea, pritličje Galea Hall, Groundfloor</i>	
<b>15.15–15.30</b>	<b>Odmor s kavo Coffee break</b> <i>Avla dvorane Galea Galea's Foyer</i>	

**15.30–17.30 Sekcije, 2. del  
Sections 2<sup>nd</sup> part  
Predstavitev posterjev, avla  
Poster presentations, Galea's Foyer**

ZNANSTVENI PRISPEVKI  
SCIENTIFIC ABSTRACTS

Sekcija IKT REŠITVE IN STORITVE  
ZA ZDRAVJE OTROK  
IN MLADOSTNIKOV  
Section ICT SOLUTIONS  
AND SERVICES FOR THE HEALTH  
OF CHILDREN AND YOUNGSTERS

Dvorana Galea  
Galea Hall

STROKOVNI PRISPEVKI  
PROFESSIONAL ABSTRACTS

Sekcija PREHRANA OTROK  
IN MLADOSTNIKOV  
Section NUTRITION  
OF CHILDREN  
AND ADOLESCENTS

Dvorana Batana  
Batana Hall

**17.30–17.45 Odmor s kavo  
Coffee break  
Avla dvorane Galea  
Galea's Foyer**

**17.45–19.15 Sekcije, 3. del  
Sections 3<sup>rd</sup> part**

STROKOVNI PRISPEVKI  
PROFESSIONAL ABSTRACTS

Sekcija GIBALNA (NE)AKTIVNOST  
OTROK IN MLADOSTNIKOV  
Section PHYSICAL (IN)ACTIVITY  
OF CHILDREN AND YOUTH

Dvorana Galea  
Galea Hall

ZNANSTVENI PRISPEVKI  
SCIENTIFIC ABSTRACTS

Sekcija GIBALNA (NE)AKTIVNOST  
OTROK IN MLADOSTNIKOV  
Section PHYSICAL (IN)ACTIVITY  
OF CHILDREN AND YOUTH

Dvorana Batana  
Batana Hall

**19.50 Zaključek konference s podelitvijo študentskih nagrad  
za najboljši prispevek  
End of the Conference with Student Abstract Award  
Announcement  
Dvorana Galea, pritličje  
Galea Hall, Groundfloor**

**PLENARNA PREDAVANJA, I. DEL**  
**PLENARY LECTURES 1<sup>st</sup> PART (8:45–9:35)**

Duševno zdravje otrok in mladostnikov z izkušnjo zlorabe Mental health of children and youth with experience of abuse <i>Gordana Buljan Flander</i>	34/35
Razvoj zdravja in zdravje mladostnikov Life Course Health Development (LCHD) and Adolescents' Health <i>Jouni Tuomi</i>	42/43

**PLENARNA PREDAVANJA, 2. DEL**  
**PLENARY LECTURES 2<sup>nd</sup> PART (14:00–15:15)**

Transdisciplinarni pristop k zdravemu šolskem okolju in oblikovanju pohištva Transdisciplinary approach to healthy school environment and furniture design <i>Danijela Domljan</i>	36/37
Oklevanje pri cepljenju kot (javno)zdravstveni izziv Vaccine hesitancy as a (public) health challenge <i>Marko Pokorn</i>	38/39
Telesna neaktivnost otrok in mladostnikov: korelate in intervencije Physical (in)activity of children and youth: correlates and interventions <i>Sanja Šalaj</i>	40/41

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

**Sekcije, I. del, dvorana Galea**  
**Sections 1<sup>st</sup> part, Galea Hall**

Sekcija OTROK IN MLADOSTNIK – OKOLJE  
 Section CHILD AND ADOLESCENT – ENVIRONMENT (10:00 – 13:00)

**PREDSTAVITVE STROKOVNIH POVZETKOV**  
**PRESENTATIONS OF PROFESSIONAL ABSTRACTS**

- I.I Razširjena obravnava otročnice in novorojenčka v patronažnem varstvu (VABLJENO PREDAVANJE)  
Extended treatment of newborn and family in community nursing (INVITED LECTURE)  
*Andreja Ljubič, Ana Žužek Barle* 140/141

- 1.2 Vpliv okolja in predmetov v vrtcih na zdravo rast in razvoj otrok  
 Impact of the environment and objects in preschool institutions  
 on the healthy growth and development of children  
*Ivan Dijanošić, Boris Iliev, Danijela Domljan, Olja Dijanošić* 144/145
- 1.3 Taborništvo je šola za življenje  
 Scouts – school for life  
*Mojca Kodelič* 150/151
- 1.4 Timska obravnava otroške debelosti na primarnem nivoju  
 Team treatment of childhood obesity at primary health care system  
 level  
*Vanja Kogoj Jug* 152/153
- 1.5 Zdravstvena nega otroka z nefrotskim sindromom – prikaz primera  
 Healthcare of children with nephrotic syndrome - case study  
*Polonca Krt* 154/155
- 1.6 Gozd, kot odprt učni prostor – primer dobre prakse  
 Forrest, as an open learning space - an example of good practice  
*Anja Loboda Čampelj* 156/157
- 1.7 Okolje kot vzpodbuda razvoja otroka  
 Environment as an impetus for the development of a child  
*Sandra Martinuč, David Ravnik* 158/159
- 1.8 Atravmatski pristop v zdravstveni negi v pediatriji  
 Atraumatic approach in pediatric nursing  
*Majda Oštir, Janja Gržinić* 162/163
- 1.9 Za rotavirusno infekcijo pogosteje obolevajo otroci  
 For rotavirus, children are more likely to get infected  
*Cvetka Pangerl* 164/165
- 1.10 Javnozdravstveni ukrepi za obvladovanje onesnaženosti z legionelami  
 v slovenskih bazenskih kopališčih  
 Public health measures for managing pollution with legionella  
 in Slovenian swimming pools  
*Tatjana Pokrajac* 168/169
- 1.11 Zobozdravstvena vzgoja in preventiva pri predšolskih otrocih  
 Dental prevention and promotion in preschool children  
*Marija Preložnik, Irena Šumer* 170/171
- 1.12 Zakaj zanemarjati vloge očetov? Slabi primeri v evropskem kontekstu  
 Why (not to) ignore the role of fathers? Insights from the European  
 context  
*Mitja Stefancic* 174/175

PREDSTAVITVE ZNANSTVENIH POVZETKOV  
PRESENTATIONS OF SCIENTIFIC ABSTRACTS

- |     |   |         |
|-----|---|---------|
| 1.1 | Zaščita psihosocialne dobrobiti in duševnega zdravja otrok v našem času<br>(VABLJENO PREDAVANJE)<br>The protection of children's psychosocial wellbeing and mental health<br>in present times (INVITED LECTURE)<br><i>Anica Mikuš Kos</i> | 160/161 |
| 1.2 | Vpliv socialne izključenosti mater na življenja njihovih otrok<br>Impact of the social exclusion of mothers on the lives of their children<br><i>Irena Ceglar</i>   | 142/143 |
| 1.3 | Koučing v zdravstveni vzgoji za zdrav življenjski slog med mladimi<br>Health couching for healthy lifestyle among young people<br><i>Rok Drnovšek, Andreja Kvas</i>   | 146/147 |
| 1.4 | Pogostost in trajanje organiziranih gibalnih dejavnosti na prostem<br>The frequency and duration of organized outdoor activities<br><i>Jera Gregorc</i>   | 148/149 |
| 1.5 | Ustreznost šolskega pohištva<br>Suitability of classroom furniture<br><i>Nastja Podrekar, Kaja Kastelic, Nejc Šarabon</i>   | 166/167 |
| 1.6 | Pozicioniranje otroka v pripomočkih za nošnjo ter hojo<br>Positioning of the child in wearing and walking tools<br><i>David Ravnik, Nives Pinter, Katarina Merše Lovrinčevič</i>  | 172/173 |
| 1.7 | Telesne karakteristike dvanajstletnih šolarjev iz Šentjerneja generacije<br>2018/19<br>Physical characteristics of twelve year olds from Šentjernej generation<br>2018/19<br><i>Tadeja Strmole</i>  | 176/177 |
| 1.8 | Šolsko okolje in vključevanje otrok s posebnimi potrebami: Sodelovanje<br>s starši<br>Inclusion of Children with Special Needs: Collaboration with Parents<br><i>Lea Šuc</i>  | 178/179 |

**Sekcije, I. del, dvorana Batana  
Sections I<sup>st</sup> part, Batana Hall**

Sekcija PSIHOSOCIALNO ZDRAVJE V OTROŠTVU IN MLADOSTI  
Section PSYCHOSOCIAL HEALTH IN CHILDHOOD & YOUTH  
(10:00–13:00)

PREDSTAVITVE ZNANSTVENIH POVZETKOV  
PRESENTATIONS OF SCIENTIFIC ABSTRACTS

- |     |   |       |
|-----|---|-------|
| 1.1 | Vloga staršev pri čustvenem spoprijemanju z otrokovo kronično bolezniijo (VABLJENO PREDAVANJE)<br>Parents' role in emotional confrontation with a child's chronic illness (INVITED LECTURE)<br><i>Tanja Pate</i>  | 46/47 |
| 1.2 | Vpliv družbenih omrežij na duševno zdravje otrok<br>The impact of social media on the children mental health<br><i>Aljaž Bajc, Žiga Tomšič, Jure Kajzar, Andraž Jereb, Andrej Starc</i>   | 48/49 |
| 1.3 | Pomen samopodobe in samospoštovanja v povezavi z motnjami hranjenja<br>The importance of self-image and self-esteem in relation to eating disorders<br><i>Nika Bajda, Maša Černelič Bizjak</i>  | 50/51 |
| 1.4 | Novi »online« izzivi na področju zdravja mladostnikov v Sloveniji<br>Health of Slovene adolescents - new challenges in the »online« world<br><i>Helena Jeriček Klanšček, Tina Zupanič, Maja Roškar, Helena Koprivnikar, Andreja Drev, Vesna Pucelj, Pia Poljanšek</i> | 58/59 |
| 1.5 | Avtoritativni vzgojni stil blaži učinek zaznane diskriminacije na zdravje mladih<br>Authoritative Parenting Moderates the Impact of Perceived Discrimination on Health<br><i>Andrej Kirbiš, Katja Kotnik, Tina Cupar, Mateja Pšunder, Karmen Osterc Kokotovič</i>     | 60/61 |
| 1.6 | Bolj tvegana souporaba psihoaktivnih snovi med mladostniki iz Slovenije<br>Hazardous polysubstance use in adolescents from Slovenia<br><i>Helena Koprivnikar, Andreja Drev, Maja Roškar, Tina Zupanič, Helena Jeriček Klanšček</i>                                    | 62/63 |

- 1.7 Izbrane duševne motnje med športno aktivnimi in neaktivnimi mladostniki  
Selected mental disorders amongst competitively active and inactive youth  
*Uroš Perko, Maša Černelič Bizjak* 72/73
- 1.8 Učinki terapevtskih taborov za otroke in mladostnike s posebnimi potrebami  
The effects of therapeutic camps for children and youth with disabilities  
*Lucija Rojko, Karmen Brence, Brigit Marc, Saša Kastelic, Andrej Starc* 76/77
- 1.9 Kakovost življenja mladih nemirnežev  
Quality of life of restless youth  
*Domen Šuta, Marija Milavec Kapun, Jure Kajzar* 78/79
- 1.10 Vpliv psihosocialnih intervencij na rezilientnost zlorabljenih otrok  
The influence of psychosocial interventions on resilience of abused children  
*Dajana Tatar, Ana Prosen, Urška Jurkovič, Ivana Knez, Andrej Starc* 80/81
- 1.11 Pojavnost tveganih vedenj med dijaki 3. letnikov na Goriškem  
Risk behaviours among 3<sup>rd</sup> grade secondary school students in the region of Goriška  
*Monika Tratnik, Andreja Kvas, Helena Jeriček Klanšček* 82/83

## PREDSTAVITVE STROKOVNIH POVZETKOV PRESENTATIONS OF PROFESSIONAL ABSTRACTS

- 1.1 Pomen interventnih programov psihosocialne pomoči otrokom in mladostnikom  
Interventional programs of psychosocial support for children and minors in distress  
*Nataša Demšar Pečak* 52/53
- 1.2 Šola v naravi za dolgotrajno bolne otroke  
School camp for children with long-term illness  
*Urška Frantar* 54/55
- 1.3 Vpliv ločitve staršev na otrokovo psihosocialno zdravje  
The effect of parental divorce on the psychosocial health of children  
*Klavdija Gorjup* 56/57
- 1.4 Strategije spoprijemanja, zdravje in dobro počutje mladih v Sloveniji  
Coping strategies, health and well-being of young people in Slovenia  
*Maja Krajnc* 64/65

- 1.5 Škodljivi vplivi permisivne vzgoje na psihosocialni razvoj otrok  
in mladostnikov  
Harmful impact of Permissive parenting on psycho-social development  
of child and youth  
*Sebastjan Kristovič* 66/67
- 1.6 Skrb za psihosocialno zdravje otrok ob pričetku šolanja  
The care of psychosocial health of children at the beginning of schooling  
*Barbara Krkoč Umer* 68/69
- 1.7 Čuječnost kot način za zmanjševanje stresa za otroke  
s posebnimi potrebami  
Mindfulness as a means of stress reduction for children  
with special needs  
*Polona Mitar* 70/71
- 1.8 Otroci, mladostniki in alkohol  
Children, adolescents and alcohol  
*Mirjana Radovanović, Barbara Lovrečič, Mercedes Lovrečič* 74/75

**Sekcije, 2. del, dvorana Galea**  
**Sections, 2<sup>nd</sup> part, Galea Hall**

**Sekcija IKT REŠITVE IN STORITVE ZA ZDRAVJE OTROK  
IN MLADOSTNIKOV**  
**Section ICT SOLUTIONS AND SERVICES FOR THE HEALTH  
OF CHILDREN AND YOUNGSTERS**  
(15:30–17:30)

**PREDSTAVITVE STROKOVNIH POVZETKOV**  
**PRESENTATIONS OF PROFESSIONAL ABSTRACTS**

- 1.1 Vključevanje didaktičnih sredstev v prehransko izobraževanje  
The inclusion of didactic tools in nutrition education  
*Martina Erjavšek, Stojan Kostanjevec* 122/123
- 1.2 Libra – bluetooth žepna kuhinjska tehnicka  
Libra: Bluetooth pocket kitchen scale  
*Barbara Koroušić Seljak, Bojan Blažica, Anton Biasizzo, Gregor Papa,  
Marina Santo Zarnik* 124/125
- 1.3 Digitalne kompetence študentov zdravstvene nege  
in mlađi digitalni domorodci  
Digital competences of nursing students and young digital natives  
*Andreja Kvas, Marija Milavec Kapun, Tina Gogova* 128/129

- 1.4 Izobraževanje o spolno prenosljivih boleznih z uporabo virtualne resničnosti  
*Education of sexually transmitted diseases with virtual reality*  
*Stana Kovač Hace, Uroš Ocepek* 126/127
- 1.5 Veš, kaj ješ?  
*Do you know what you eat?*  
*Anja Zupan, Nika Kremič, Jasmina Bevc Bahar, Urša Šmid* 136/137
- PREDSTAVITVE ZNANSTVENIH POVZETKOV**  
**PRESENTATIONS OF SCIENTIFIC ABSTRACTS**
- 1.1 I8 let spletne svetovalne prakse mladim v Sloveniji  
*(VABLJENO PREDAVANJE)*  
*18 years of youth web counselling practice in Slovenia*  
*(INVITED LECTURE)*  
*Ksenija Lekić, Petra Tratnjek, Nuša Konec Juričič, Domen Kralj,*  
*Marjan Cugmas* 116/117
- 1.2 Uporaba informacijsk-komunikacijskih tehnologij pri učencih petega razreda v osnovni šoli  
*The use of information and communication technology at fifth graders of elementary school*  
*Tina Demšar* 118/119
- 1.3 Zasvojenost z družbenimi omrežji med mladostniki  
*Addiction with social networks between youth*  
*Andreja Draginc, Kristina Rakuša Krašovec* 120/121
- 1.4 Kaj je vidno na fotografiji hrane in pijač?  
*What is visible on the photography of food and beverages?*  
*Simon Mezgec, Tome Eftimov, Tamara Bucher, Barbara Koroušić Seljak*
- 1.5 Uporaba digitalnih medijev pri otrocih in njeni socialno-emocionalni in zdravstveni izidi  
*Digital media use in young children and its socio-emotional and health outcomes*  
*Marina Perković Kovačević, Marina Kotrla Topić, Marija Šakić Velić* 130/131
- 1.6 Uporaba interneta kot prediktor spletnega ustrahovanja med dijaki  
*Internet usage among secondary school pupils as predictor of cyberbullying*  
*Krešimir Šolić, Tena Velki, Kristina Kralik, Ivana Borić Letica* 134/135

**Sekcije, 2. del, dvorana Batana**  
**Sections 2<sup>nd</sup> part, Batana Hall**

Sekcija PREHRANA OTROK IN MLADOSTNIKOV  
Section NUTRITION OF CHILDREN AND ADOLESCENTS  
(15:30–17:30)

PREDSTAVITVE ZNANSTVENIH POVZETKOV  
PRESENTATIONS OF SCIENTIFIC ABSTRACTS

- |     |  |         |
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**Vabljeni  
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**G**ordana Buljan Flander je psihologinja in psihoterapeutka, ki trenutno dela kot direktorica Centra za zaščito otrok in mladih v Zagrebu, ustanove, specializirane za delo s travmatiziranimi otroki in njihovimi družinami. Leta 1997 je ustanovila Pogumni telefon za pomoč zlorabljenim in zapostavljenim otrokom, leta 2002 pa Center za zaščito otrok in mladih v Zagrebu. Za svoje delo je prejela številne nagrade, med najpomembnejšimi je zagotovo nagrada za življenjsko delo iz leta 2018. Je soavtor 9-ih knjig in številnih znanstvenih člankov o otrokovem razvoju, starševstvu in otrokovi travmi. Deluje tudi kot predavateljica na Univerzi v Zagrebu in Osijeku in kot strokovnjakinja izvedenka na sodišču.

*Gordana Buljan Flander, Ph.D, is a psychologist and psychotherapist, currently working as a Director of the Child Protection Center of Zagreb, an institution specialized in working with traumatized children and their families. In 1997 she founded the Brave Phone, help line for abused and neglected children, and in 2002 initiated foundation of the Child Protection Center of Zagreb. She received many awards for her work, the most significant being Lifetime Achievement Award from 2018. She coauthored 9 books and numerous scientific papers regarding child development, parenting and child trauma. She also works as a lecturer on University of Zagreb and Osijek, and is an expert witness in court.*



**D**anijela Domljan je rojena leta 1971 v Zagrebu. Diplomirala je na Fakulteti za uporabno umetnost in oblikovanje na Oddelku za arhitekturo (1990) in Fakulteti za arhitekturo (1996) ter doktorirala na Fakulteti za gozdarstvo v Zagrebu (2011) na temo Oblikovanje sodobnega šolskega pohištva kot predpogoj za vzdrževanje zdravja učencev. Zaposlena je kot docentka na Fakulteti za gozdarstvo, na Oddelku za pohištvo in lesne izdelke, kjer se ukvarja z znanstvenim raziskovanjem in poučevanjem na področju oblikovanja in tehnologije lesa, umetnosti in ergonomije s poudarkom na projektnem razmišljjanju, okoljskih analizah in uporabniku prijazne podpore pri reševanju problemov. Je dobitnica številnih priznanj s področja njenega dela in strokovna članica Hrvaške zveze oblikovalcev, Hrvaškega ergonomskega društva, Društva za industrijsko oblikovanje pri Gospodarski zbornici, Združenja OPA, UBU in članica številnih nacionalnih odborov. Objavila je več kot 95 znanstveno-raziskovalnih del, ter kot gostujuči profesor izvedla več kot 40 predavanj na konferencah in kongresih po Evropi in ZDA.

*Danijela Domljan.* Born in Zagreb in 1971, graduated from the Faculty for Applied Art and Design, Department of Architecture (1990), and at Faculty of Architecture (1996). In 2011 she defended her doctoral thesis upon the title The Design of Contemporary School Furniture as a Prerequisite for Maintenance of Pupils' Health at the Faculty of Forestry in Zagreb. Currently, she is employed as Assistant Professor at the Faculty of Forestry in Zagreb, dealing with scientific research and teaching in design field, combining design and wood technology, art and ergonomic with the focus on design thinking, environmental analyses and user oriented solving problem. She is a professional member of the Croatian Designers Association, Croatian Ergonomic Society, Association for Industrial Design at the Chamber of Commerce, the Association of OPA, UBU and numerous committees (Ministry of Education, Zagreb Fairs, Chamber of Economy, Agency for Vocational Education and Training and Adult Education, etc.) as a designer. As a scientist and researcher she has published over 95 scientific and popular science works, held more than 40 lectures at conferences and congresses and visited over 10 Universities in Europe and USA as visiting guest and professor.



**D**r. Marko Pokorn je specialist pediatrije in infektologije ter docent za področje infekcijskih bolezni in epidemiologije, zaposlen na Kliniki za infekcijske bolezni in vročinska stanja, UKC Ljubljana in Katedri za infekcijske bolezni in epidemiologijo Fakultete za medicino Univerze v Ljubljani. Po zaključku študija medicine leta 1993 je opravil specializacijo iz pediatrije leta 2000, leta 2012 pa je pridobil še naziv specialista infektologije. Pri svojem delu se osredotoča na obravnavo okužb pri otrocih s posebnim poudarkom na invazivne bakterijske okužbe ter okužbe kosti in sklepov. V okviru doktorske disertacije je preučeval virusne okužbe pri otrocih z vročinskimi krči. Poglavitna raziskovalna področja vključujejo virusne okužbe dihal in prebavil, klinične in epidemiološke vidike invazivnih bakterijskih okužb pri otrocih in cepiva.

Marko Pokorn, MD, PhD, is Consultant for Paediatric Infectious Diseases and Assistant Professor of Infectious Diseases at the Department of Infectious Diseases, University Medical Centre Ljubljana, Slovenia. After graduating from Faculty of Medicine at the University of Ljubljana in 1993 he completed his paediatric training to become Specialist of Paediatrics in 2000 and subsequently Specialist in Infectious Diseases in 2012. His work focuses on all aspects of management of infections in childhood with a particular reference on invasive bacterial infections and osteoarticular infections. For his PhD thesis he studied viral infections in febrile seizures. Main areas of research include viral respiratory and enteric infections, clinical and epidemiological aspects of invasive bacterial infections in children and vaccines.



**D**r. Sanja Šalaj je od leta 2003 zaposlena na Univerzi v Zagrebu, Fakulteti za kinezijologijo, kjer kot docentka sodeluje na katedri za Kinezijologijo na dodiplomskih in poddiplomskih študijskih programih ter na programih izobraževanja učiteljev predšolske vzgoje. Sodeluje tudi pri izvajanju poddiplomskega študija Medicine dela in športa na Fakulteti za Medicino, Univerze v Zagrebu. Njena znanstveno-raziskovalna dela so objavljena v več kot 30 znanstvenih revijah, kot gostujoči predavatelj je izvedla 17 vabljenih predavanj. Sodelovala je pri organizaciji in pripravi številnih mednarodnih konferenc. Kot urednica je sodelovala pri izdaji 9 zbornikov konferenc. Je strokovna sodelavka znanstvene revije Kinesiology. Raziskovalno je usmerjena na področje gibalnega razvoja in treninga otrok. Dr. Sanja Šalaj je bila vodja raziskovalnega projekta »Motor skills of preschool children« (2015 – 2018), Evropskega projekta »Internationalization of Higher Education – Creation of postgraduate specialist study on prevention and rehabilitation of sport injuries« (2018 – 2021), kot znanstveni sodelavec je sodelovala na dveh raziskovalnih projektih od 2007 do 2013. Je članica Hrvaške kinezijološke zveze trenerjev, Zveze Hrvaške telesne kondicije in Evropske zveze za telesno kondicijo.

*Sanja Šalaj.* Since 2003 Sanja Šalaj has been employed at the University of Zagreb, Faculty of Kinesiology, where as an Assistant Professor participates in exercises, seminars and lectures at professional, undergraduate and graduate studies of kinesiology. She collaborates at postgraduate studies at the Faculty of Kinesiology and in postgraduate professional studies Work and Sports Medicine and the School Medicine at the Faculty of Medicine University of Zagreb. She published over thirty scientific papers, as invited lecturer she performed seventeen invited lectures. She participated and organized numerous international conferences, she was an editor of nine proceedings books of scientific-professional conferences. She is a reviewer in scientific journal Kinesiology. Her research field of interest based on motor development and aspects of children training; she participated in two scientific projects since 2007 – 2013 and was a head of research project »Motor skills of preschool children« (2015 – 2018) and European project »Internationalization of Higher Education – Creation of postgraduate specialist study on prevention and rehabilitation of sport injuries.« (2018 – 2021). She is a member of Croatian Kinesiology Association coaches, Association of Croatian physical conditioning and European Physical Conditioning Association).



**Jouni Tuomi** je doktoriral na Jyväskylä Univerzi na Finskem leta 1997. Svoje delo je opravljal na številnih univerzah na Finskem, danes je zaposlen kot nosilec predmetov na področju promocije zdravja na »Tampere University of Applied Sciences«. Je vodja finskega nacionalnega projekta »Wise Choises - Preconception Health Development among Youths and Young Adults« (2018-2020) in koordinator ERASMUS+ projekta »Preconception Health of Youth« (2018-2020). Objavil je več kot 100 prispevkov in je avtor številnih monografij ter sourednik več kot 10 monografij iz različnih področij.

**Jouni Tuomi** has completed his PhD from Jyväskylä University 1997. He has worked in different Universities in Finland. Nowadays he is a Principal Lecturer in Health Promotion in Tampere University of Applied Sciences, and a project manager in (National) “Wise Choises - Preconception Health Development among Youths and Young Adults” (2018-2020) and a project coordinator in (European) “Preconception Health of Youth” (2018-2020). He has published 100 papers in Finnish and some in English, and is an author of several books as well as co-editor over 10 books in Finnish in different fields.

# **Plenarna predavanja Plenary lectures**

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## Duševno zdravje otrok in mladostnikov z izkušnjo zlorabe

Gordana Buljan Flander

Poliklinika za zaščito otrok in mladih mesta Zagreb, Đorđićeva 26, 10000 Zagreb,  
Hrvaška

Travmatična izkušnja ali izkušnja z izredno stresnim dogodkom, ki pusti resne in dolgotrajne posledice na otrokovem mentalnem zdravju, se lahko smatrajo kot najpomembnejši dejavnik, ki negativno vpliva na mentalno zdravje otrok in mladostnikov. Zloraba otrok je opredeljena kot skupek vedenj in dogodkov, kjer je otrok žrtev psihološkega, fizičnega, spolnega ali čustvenega nasilja, povzročenega s strani druge osebe, naj bo to vrstnik ali odrasla oseba. Je oblika travmatične izkušnje, ki povzroči pri otrocih razvoj težav v duševnem zdravju ali celo vodi k razvoju motenj. Skladno s poročili Sveta Evrope je število zlorabljenih otrok zaskrbljujoče; vsaka četrtta deklica in vsak šesti deček je žrtev spolne zlorabe, kar nakazuje na naraščajoče število otrok, ki se kasneje soočajo s travmo in hudimi problemi v duševnem zdravju ter s stigmatizacijo okolja, kar dodatno otežuje žrtvam zlorabe, da si opomorejo. Nekateri problemi v duševnem zdravju, ki se razvijejo kot rezultat zlorabe otrok in mladostnikov, so lahko depresija, anksioznost, samopoškodovalno vedenje in celo samomor. Če ne odgovorimo hitro in primerno na zlorabo otrok in mladostnikov, lahko to vodi do težav v kasnejšem funkcioniranju, npr. problemov v odnosih znotraj družine, nesposobnost vzpostavitev kakovostnih prijateljskih in ljubezenskih zvez, socialni neadekvatnosti, zlorabi alkohola in drog, anksioznim in depresivnim motnjami, ponavljačkim se bodočim zlorabam svojih družinskih članov in celo poskusom samomora.

**Ključne besede:** travma, zloraba, duševno zdravje, otrok, mladostnik

## **Mental health of children and youth with experience of abuse**

*Gordana Buljan Flander*

*Child and Youth Protection Center of Zagreb, Đordićeva 26, 10000 Zagreb,  
Croatia*

Traumatic experience, or experience of intense stressful event that leaves extremely severe and long-lasting consequences on the child's mental health can be considered as the most significant factor in disrupting the mental health of children and young people. Children abuse is defined as a set of behaviours and events during which the child is a victim of psychological, physical, sexual or emotional violence by another person, peer or adult. It is a form of traumatic experience which causes children to develop mental health problems or lead even to development of disorders. According reports of Council of Europe the prevalence of abused children is worrying; every 4th girl and every 6th boy is a victim of sexual abuse, which points to the growing number of children who later deal with trauma and intense mental health problems, but also stigmatization of the environment which makes it more difficult for the victim of abuse to recover. Some of mental health problems which develop as a result of abuse in children and youth can include depression, anxiety, self-harm, and suicide. If we don't respond to abuse of children and youth as soon as possible and in an adequate manner, it can lead to a number of problems in later functioning, such as: disrupted family relationships, inability to achieve high quality friendly and romantic relationships, social inadequacy, alcohol and drug abuse, anxiety and depressive disorders, repetition of abusive behavior towards their family members in the future and suicide attempts.

**Keywords:** trauma, abuse, mental health, children, youth

## **Transdisciplinarni pristop k zdravemu šolskemu okolju in oblikovanju pohištva**

*Danijela Domljan*

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Oblikovanje šolskega okolja in šolskega pohištva predstavlja transdisciplinarni, premalo raziskan problem. Odgovorno oblikovanje zavzema otroke in mladostnike kot specifično in občutljivo uporabniško skupino, predvsem zato, ker otroci skozi šolsko obdobje preidejo skozi intenzivno psihofizično, kognitivno, socialno in čustveno rast in razvoj. Raziskava Sveta za oblikovanje je potrdila, da je malo znanega o tem, kako šolsko okolje in oblikovanje pohištva vplivata na odnos, vedenje in dobro počutje otrok, povečanje njihove pripravljenosti za učenje, ustvarjalnosti in željo po ohranjanju šolskega okolja. Številne študije po svetu potrjujejo neskladje med pohištvtom in otroki v šolah, nezadovoljstvom otrok in pritožbami glede miščno-skeletalnih motenj, bolečine v hrbtni in glavoboli. Današnja zasnova šolskega okolja je večinoma neprimerna in zastarella, disfunktionalna, ter ne sledi sekularnim trendom fizične rasti ali občutku dobrega počutja v šoli. Trenutno zasnovo šolskega okolja in pohištva je potrebno nujno preoblikovati. V ta proces morajo biti vključeni interdisciplinarni in transdisciplinarni strokovnjaki s področij zdravja, šolske medicine in delovne terapije, ergonomije, antropometrije, pedagogike, oblikovanja in arhitekture, javnega naročanja in proizvodnje, predvsem pa otroškega oblikovanja in razmišljanja. Inovativni pristop in praksa v šolskem okolju oblikujeta najpomembnejše zahoteve. Glavni cilj je doseči zdravje in dobro počutje otrok v šolah.

**Ključne besede:** šolsko okolje, oblikovanje pohištva, otroci, zdravje, dobro počutje

## **Transdisciplinary approach to healthy school environment and furniture design**

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Design of school environment and school furniture represents a transdisciplinary insufficiently researched problem. Responsible design observes children and adolescents as a specific and sensitive user group, mostly because during the school period children pass through intense psychophysical, cognitive, social and emotional growth and development. Research by the Design Council has confirmed that little is known about how school environment and furniture design affect the attitudes, behavior and well-being of children, enhance their willingness to learn, increase creativity and desire to preserve the school environment. Numerous studies around the world confirm the mismatch between furniture and children in schools, child dissatisfaction and complaints about musculoskeletal disorders, back pain (MSD/BP) and headaches. Today's school environment design is mostly discouraging and outdated, dysfunctional, does not follow secular trends in physical growth or encourage a sense of well-being at school. The current design of school environment and furniture needs to be redesigned urgently. In this process has to be involved inter- and transdisciplinary oriented experts in the fields of health, school medicine and occupational therapy, ergonomics, anthropometry, pedagogy, design and architecture, public procurement and production, and above all - children-oriented design, design thinking, innovative approach and practice in school environment design the most important requirements. The main goal is to achieve children's health and well-being in schools.

**Keywords:** school environment, furniture design, children, health, well-being

## **Oklevanje pri cepljenju kot (javno)zdravstveni izziv**

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S cepljenjem preprečimo, da bi oseba zbolela za nalezljivo boleznijo, pri tistih boleznih, ki se prenašajo s človeka na človeka, pa tudi preprečimo širjenje okužbe na necepljene osebe. Na ta način je cepljenje v zadnjih več kot dvesto letih pomembno prispevalo k svetovnemu zdravju ter dolgoživosti. A cepiva so postala žrtev lastnega uspeha in v letu 2019 je oklevanje pri cepljenju Svetovna zdravstvena organizacija prepoznała kot eno od desetih groženj globalnemu zdravju. V zadnjih letih se tudi v Sloveniji soočamo z zmanjšanjem zaupanja v cepljenje, kar je privedlo do zmanjšanja deleža cepljenih otrok proti določenim nalezljivim boleznim, vključenim v program obveznega cepljenja, še bolj pa se je to odrazilo na izrazito manjšem deležu otrok, cepljenih s cepivi, ki so del programa cepljenja, niso pa obvezna. Starši, ki oklevajo glede cepljenja, pogosteje iščejo podatke na svetovnem spletu, kjer obstaja veliko neverodostojnih informacij. Pri načrtovanju strategij, kako se soočati z oklevanjem pri cepljenju, je potreben večplasten pristop. Veliko raziskav se ukvarja s psihološkim ozadjem sprejemanja odločitev v zvezi z zdravjem. V zadnjem času so internetni velikani omejili proticepilske vsebine na svojih strežnikih. Nekatere zahodnoevropske države so pričele sprejem v vzgojno-izobraževalne ustanove pogojevati s cepljenjem in na ta način povečale delež cepljenih otrok. Še vedno pa starši pri odločitvi glede cepljenja najbolj zaupajo otrokovemu zdravniku.

**Ključne besede:** cepljenje, oklevanje pri cepljenju, zdravje, otrok

## Vaccine hesitancy as a (public) health challenge

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Vaccination prevents infectious disease in vaccinated persons as well as transmission of contagious diseases to non-vaccinated individuals. Thus, in more than 200 years, vaccination has significantly contributed to improved global health and longevity. Vaccination has become the victim of its own success and vaccine hesitancy has been included in the list of 10 global health threats by the World Health Organisation in 2019. In Slovenia, a decline in vaccine confidence has been observed recently, contributing to decreasing vaccination rates for mandatory vaccines in children and exerting a detrimental effect on vaccination rates for non-mandatory vaccines in the immunization programme. Vaccine-hesitant parents are more likely to search for information regarding immunization on the internet where considerable amount of unreliable data exist. In order to combat vaccine hesitancy, strategies have to include multidisciplinary approaches. Intense research is being done on psychological aspects of individual health-related decision-making. Large internet companies have limited anti-vaccine contents on their servers. Some West-European countries have increased vaccination rates through introduction of mandatory vaccination requirement for school entry. Nevertheless, the primary care provider remains the parents' most trustworthy source for vaccine-related information.

**Keywords:** vaccination, vaccine hesitancy, health, child

## Telesna neaktivnost otrok in mladostnikov

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V prizadevanjih za zmanjšanje tveganja, ki ga za javno zdravje predstavljata prekomerna telesna masa in debelost pri otrocih in mladostnikih, se izvajajo ukrepi za spodbujanje telesne dejavnosti in zmanjšanje sedentarnosti pri mladih (Nilsson et al, 2009). Za izvedbo učinkovitih intervencij je potrebno poznati široko paleto spremenljivk in determinant telesne aktivnosti (TA) (Sallis et al, 1999; Nilsson et al, 2009; Stanley et al, 2012), vključno s socialno-demografskimi, okoljskimi in vedenjskimi dejavniki. Najpomembnejše spremenljivke TA so spol, starost, socialno-ekonomski status ter starševski in vrstniški vplivi (Craggs et al, 2011). Zaradi ozaveščenosti o koristih redne TA, so številne intervencije poskušale povečati raven TA pri otrocih v različnih okoljih in z različnim uspehom (Stanley et al, 2012). Ravno šolsko okolje je že dolgo prepoznamo kot idealno za implementacijo intervencij na področju TA. Aktualne pregledne raziskave kažejo, da je promocija TA v šolah učinkovita za povečanje le-te v šoli sami, vendar je učinek intervencij na zunajšolsko TA manj izrazit (Kriemler et al, 2011). Metaanaliza učinkov intervencij na področju TA na objektivno merjeno TA kaže majhen vpliv na splošno telesno aktivnost otrok, saj se ta podaljša za približno 4 minute hoje ali teka na dan (Metcalf et al, 2012). Dotična predstavitev bo osredotočena na pregled spremenljivk telesne aktivnosti in učinkov intervencij za povečanje TA in zmanjšanje sedentarnosti pri otrocih in mladostnikih.

**Ključne besede:** zdravje, sedentarnost, predšolsko obdobje, puberteta

## **Physical (in)activity of children and youth**

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In efforts to reduce current public health concern of overweight and obesity in children and adolescents, actions are being made to promote physical activity (PA) and reduce sedentary time in youth (Nilsson et al, 2009). To conduct efficient interventions, it is important to understand a broad range of correlates and determinants of PA (Sallis et al, 1999; Nilsson et al, 2009; Stanley et al, 2012) including socio-demographic, environmental and individual behavioural factors. Most-researched correlates are gender, age, socio-economic status, parental and peer influences (Craggs et al, 2011). Due to awareness of the health benefits of regular PA, many interventions have tried to increase children's PA levels in different environments with varied levels of success (Stanley et al, 2012). In-school setting has long been defined as the ideal environment for PA promotion interventions. Recent reviews generally showed that school-based PA promotion was effective at increasing PA during school, although effect on out-of-school and overall PA is less clear (Kriemler et al, 2011). In meta-analysis of physical activity interventions on objectively measured levels of PA, interventions had only a small effect on children's overall activity levels: about 4 minutes more walking or running per day (Metcalf et al, 2012). This lecture will focus on reviewing correlates of PA and effects of interventions for increasing physical activity and reducing sedentary time in children and adolescents.

**Keywords:** health, sedentary time, preschool, adolescence

## Razvoj zdravja in zdravje mladostnikov

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Kljub temu, da je najstništvo privilegirano obdobje in na splošno znano kot »obdobje brez bolezni«, so za to obdobje vseeno značilne določene problematične transformacije in tranzicije. Zaradi postopnega prehoda v spolno zrelo obdobje so najstniki v tem obdobju lahko bolj ali manj zmedeni. V finskih šolah si zato prizadevamo demistificirati omenjeno problematiko s pomočjo predmeta zdravstvena vzgoja, vendar pa je omenjena zdravstvena vzgoja problematična z vidika razvoja zdravja (angl. Life Course Health Development). Študije navajajo, da najstniki želijo skrbeti za svoje zdravje. Vendar pa je njihovo znanje in odnos do skrbi za spolnost, še posebej na področju problematike povezane z reproduktivnim zdravjem, razmeroma slabo, kljub temu, da to neposredno vpliva tako na njihovo zdravje kot na zdravje njihovih (morebitnih) otrok. Razlike v znanju in odnosu do spolnosti ter reproduktivnega zdravja so ugotovljene med najstniki srednjih in poklicnih šol, še posebej so razlike izrazite med fanti in dekleti. Ni pa znana situacija med najstniki, ki so prekinili z izobraževanjem pri 16. letu starosti. Naša raziskovalna skupina si glede na zgoraj omenjene težave, prizadeva poiskati nove rešitve z izdelavo video posnetkov, animacij in t. i. resnih iger na področju spolnosti in reproduktivnega zdravja, namenjenih mladostnikom in mlajšim odraslim. Izdelali smo digitalno učno okolje, novo e-knjigo namenjeno učiteljem zdravstvene vzgoje. Prav tako razvijamo namenske aplikacije, katerih cilj je olajšati razpravo o spolnosti in reproduktivnem zdravju, namenjeno medicinskim sestram promotorkam zdravja, zaposlenih na različnih ravneh zdravstvenega varstva, šolah in univerzah. Prav tako lahko vsi brezplačno uporabljajo omenjene digitalne inovacije na svojih pametnih telefonih.

**Ključne besede:** razvoj zdravja, mladostnik, reproduktivno zdravje

## **Life Course Health Development (LCHD) and Adolescents' Health**

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Although the teenage period is “privileged”, because of the generally disease-free status, this period is characterised by troublesome transformations and transitions. During this period youngsters are, as the majority of us were, more or less confused by the awakening of their sexuality. We try to help this population in the demystification of these problems through the health education courses in Finnish schools. However, this health education is problematic from perspective of Life Course Health Development (LCHD). According to the researches, teenagers want to take care of their health, but their knowledge and attitudes on how to take care of their sexuality, especially preconception health, are relatively weak despite the fact that these issues are very important for their health and are affecting as far as to their (potential) future children. The differences in knowledge and attitudes to sexuality and preconception health between teenagers in high and vocational schools are huge, not to mention the gender differences. Furthermore, the data regarding the aforementioned problem among the teenagers, who have dropped out the schools at the age of 16, is unknown. Our team is trying to find out new solutions for these problems by making videos, animations and a serious game of sexual and preconception health for youths and young adults. We have created a digital learning environment, “a novel digital book”, for teachers of health education. We are currently developing apps ‘to facilitate the discussion about sexual- and preconception health’ for public health nurses working on different levels in schools and in universities. All of these digital innovations are free of charge.

**Keywords:** life course health development, adolescent, preconception health



## **Konferenčni povzetki Conference abstracts**

### **Sekcija/Section**

**Psihosocialno zdravje v otroštvu in v mladosti  
Psychosocial health in childhood and youth**

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## Vabljeno predavanje Invited lecture

### Vloga staršev pri čustvenem spoprijemanju z otrokovo kronično boleznijo

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Uvod: Starši imajo pomembno vlogo v otrokovem življenju s kronično bolezni jo. Za otroka predstavljajo vir opore, pomiritve, potrditve, zlasti pomembno vlogo pa imajo pri obvladovanju otrokove bolezni, kot tudi zagotavljanju kako vostnejšega življenja.

Metode: V prispevku bo prikazano doživljanje staršev otrok s sladkorno bolezni jo tipa I (SBTI). V raziskavi je sodelovalo 7 staršev otrok s SBTI, starih od 4 do 9 let. Trajanje SBTI pri otrocih je bilo od 1 do 3 let. Podatki so bili zbrani na podporni skupini za starše in analizirani s tematsko analizo.

Rezultati: Osrednja tema je bila »prilagajanje«, podteme pa čustveno doživljanje, doživljanje bolezni, doživljanje otroka, ambivalentnost v starševstvu in odzivi okolja. Življenje s SBTI predstavlja nenehno spreminjač proces prilagajanja. SBTI namreč poseže na prav na vsa področja življenja in zahteva prilagoditev v starševskem funkcioniranju, zlasti pa prilagoditev na nov načina življenja zaradi bolezni tako znotraj kot tudi zunaj družine.

Razprava in zaključek: Način, kako se bosta otrok in posledično celotna družina soočila s to preizkušnjo, ni odvisen samo od starševskega načina spoprijemanja z bolezni jo, ampak predvsem od zmožnosti starševske čustvene regulacije. Rezultati raziskave kažejo pomembnost starševske vloge, ki pa je pogosto ujeta v pasti zahtev bolezni, kot tudi razvojnih zahtev otroka, družine in okolja. Razumevanje izkušnje staršev je velikega pomena in v pomoč pri terapevtskem delu z družinami otrok s SBTI.

**Ključne besede:** starši, sladkorna bolezen tipa I, čustva, sprememba, spoprijemanje

## **Parents' role in emotional confrontation with a child's chronic illness**

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**Introduction:** Parents play an important role in the life of a child with a chronic illness. They represent a source of support, reconciliation, and confirmation to the child, and play a particularly important role in illness management, as well as providing a better quality of life.

**Methods:** The experience of parents of children with type I diabetes (TID) will be presented. The study involved 7 parents of children with TID aged 4 to 9 years. The duration of TID was from 1 to 3 years. The data were collected during the Parent Support Group sessions and analyzed with a thematic analysis.

**Results:** The main theme was "adaptation", subthemes were emotional experience, experience of TID, experience of child, ambivalence in parenting and environmental responses. Living with TID represents a constantly changing adjustment process. TID affects all areas of life and requires adaptation in parental functioning, particularly adaptation to a new way of living both inside and outside the family.

**Discussion and conclusions:** The way in which the child and consequently the entire family face this experience does not depend solely on the parental way of dealing with the disease, but mostly on parental ability of emotion regulation. The results of the research show the importance of parental role, which is often trapped by the requirements of the disease as well as the developmental requirements of the child, the family and the environment.

**Keywords:** parents, type I diabetes, emotions, change, coping

## Vpliv družbenih omrežij na duševno zdravje otrok

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**Uvod:** Uporaba družbenih omrežij zaradi hitrega napredka in razvoja med ljudmi narašča, s čimer se povečujejo možnosti načina komunikacije med ljudmi. Vse večja pa je tudi uporaba družbenih omrežij med najstniki in otroci. Poleg pozitivnih učinkov uporabe družbenih omrežij pa le-ta lahko predstavljajo zdravstvena tveganja pri ranljivih skupinah, kot so otroci in mladostniki.

**Metode:** Uporabljena je bila deskriptivna metoda dela s kritičnim pregledom slovenske in angleške strokovne in znanstvene literature z uporabo CINAHL, Medline, ERIC, Google scholar, Cochrane knjižnice in COBIB.SI baze podatkov. Kriteriji za vključevanje literature so bili članki, objavljeni med letoma 2009 in 2019. Vključili smo le strokovne in znanstvene članke, ki so analizirali otroke do 18. leta starosti.

**Rezultati:** Rezultati so pokazali soodvisnost med večjo porabo časa na družbenih omrežjih in povečanim tveganjem za samopoškodovalno vedenje, psihološke stiske in samomorilske ideje, tesnobo in spremembe v razpoloženju, kot tudi razvoj depresije.

**Razprava in zaključek:** Uporaba družbenih omrežij v času otroštva in mladosti ima lahko pozitivne in negativne vplive na nadaljnjo duševno zdravje. Zdravstveni sistem bi moral poudarjati razvoj varne uporabe družbenih omrežij in zagotoviti učinkovito duševno podporo tistim, ki jo potrebujejo. Zaradi po-manjkanja dokazov na tem področju so potrebne nadaljnje raziskave.

**Ključne besede:** najstniki, družbene omrežja, motnje v duševnem zdravju, zdravje otrok

## **The impact of social media on the children mental health**

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**Introduction:** Usage of social media among people is increasing due to the fast evolution of technology and profound changes between peoples communication. Social media is being used increasingly by adolescents and children. Social media, beside positive effects can pose risks for vulnerable population groups, such as children and adolescents.

**Methods:** A descriptive research method with a critical review of Slovenian and English professional and scientific literature was performed, using the CINAHL, Medline, ERIC, Google scholar, Cochrane library and the COBIB.SI database. Literature inclusion criteria were articles published between 2009 and 2019. We included only professional and scientific articles that analysed children up to the age of 18.

**Results:** The results have shown the correlation between spending more time on online social networking and increased chances for self-harm behaviour, psychological distress and suicidal ideation, anxiety and mood changes, as well as development of depression.

**Discussion and Conclusion:** Use of social media in childhood and/or in adolescence can both have, positive or negative effects on future mental well-being. Health care system should emphasize the development of a safety use of social media and ensure effective mental health support to those who need it. There is a lack of evidence regarding this topic present, and further high-quality research is needed. Understanding of the experience of parents is of a great meaning and help with therapeutic work with families and their children with TID.

**Keywords:** adolescents, social network, mental disorder, children health

## **Pomen samopodobe in samospoštovanja v povezavi z motnjami hranjenja**

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**Uvod:** Starost začetka razvoja motenj hranjenja je vse nižja. Med pomembnimi psihosocialnimi dejavniki, ki so povezani s pojavom motenj sta samopodoba in samospoštovanje. Kritična leta za razvoj samospoštovanja so otrokova prva leta življenja. Tako je nujno že zgodaj, v času institucionalnega varstva, prepoznati probleme z nezdravo samopodobo in samospoštovanjem pri otrocih. Namen študije je bil osvetliti problematiko nizke samopodobe in nizkega samospoštovanja, v povezavi z motnjami hranjenja.

**Metode:** V vzorec je bilo vključenih 30 oseb ženskega spola. Za potrebe pridobivanja podatkov smo izvedli polstrukturiran intervju ter uporabili tri standardizirane vprašalnike, ki se nanašajo na samopodobo in samospoštovanje.

**Rezultati:** Rezultati, ki smo jih dobili na našem vzorcu kažejo, da imajo osebe z motnjo hranjenja v primerjavi z dostopnimi normami nižje povprečne rezultate v splošni samopodobi, čustveni stabilnosti, odnosih z vrstniki istega in nasprotnega spola in odnosi s starši.

**Razprava in zaključek:** Raziskava potrjuje pomen primarne preventive na področju motenj hranjenja. Že v času institucionalne vzgoje bi morali ravno tem značilnostim samopodobe in samospoštovanja pri otrocih namenjati največ pozornosti – samougajanju, splošni samopodobi, čustveni stabilnosti in pomenu odnosov.

**Ključne besede:** osebnostne in psihološke značilnosti, motnje hranjenja, samopodoba, samospoštovanje, preventiva

## **The importance of self-image and self-esteem in relation to eating disorders**

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**Introduction:** The age at which children and adolescents are starting to suffer from an eating disorder is getting lower every day. Two of the most significant psychosocial factors are self-image and self-esteem. The most critical age for developing self-esteem is that of the very first years of a child's life. Thus, it is necessary to early, i.e. during the institutional day care, recognize the problems connected with a child's poor self-image and self-esteem. The aim of the study was to highlight the problems of low self-image and self-esteem in relation to eating disorders.

**Method:** The sample included 30 female participants. For the purpose of data collection we applied a semi-structured interview and three standardized questionnaires in connection with self-image and self-esteem.

**Results:** The results obtained in our sample show that compared with accessible norms people suffering from eating disorders achieve lower average results concerning general self-image, emotional stability, peer relationships of the same or opposite gender and parental relationships.

**Discussion and conclusions:** The research supports the importance of primary prevention in the field of eating disorders. Already during institutional day care closest attention should be paid precisely to the traits of self-image and self-esteem in children, i.e. to self-liking, general self-image, emotional stability and importance of relationships.

**Keywords:** personality and psychological traits, eating disorders, self-image, self-esteem, prevention

## Pomen interventnih programov psihosocialne pomoči otrokom in mladostnikom

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Družina je kot osnovna celica sodobne družbe izpostavljena vse večjim pritiskom in pričakovanjem, zato potrebuje različne oblike podpore. Pomembna naloga države je, da v čim večji meri zagotavlja socialno vključenost, varstvo in zaščito otrok/mladostnikov. Za učinkovitejše doseganje teh ciljev, je država razvila mrežo interventnih programov v podporo družini. Namen prispevka je predstaviti programe v podporo družini, ki so financirani s strani Ministrstva za delo, družino, socialne zadeve in enake možnosti. Programi so prednostno namenjeni otrokom, mladostnikom in njihovim družinam, katerih cilj je izboljšanje medsebojnih odnosov in zmanjševanje čustvenih stisk otrok in mladostnikov. Vsebine interventnih programov so: pomoč otrokom in mladoletnikom prikrajšanim za primerno družinsko življenje, preprečevanje nasilja, pomoč žrtvam nasilja, različne zasvojenosti, duševno zdravje, podpora otrokom s posebnimi potrebami, socialno vključevanje itd. Z omenjenimi programi želimo zmanjšati neenakost pri dostopnosti tovrstnih storitev ter vzpostaviti medsebojno sodelovanje med različnimi institucijami, saj je za dobre rezultate na področju varstva in zaščite otrok in mladostnikov ter njihove blaginje, potrebno kooperativno in učinkovito sodelovanje državnih organov, lokalnih skupnosti, nevladnih organizacij ter vseh drugih relevantnih deležnikov. Pomembno je, da država prepozna potrebe različnih skupin otrok in svoje politike oblikuje oziroma načrtuje tako, da uspešno odgovori nanje.

**Ključne besede:** otroci/mladostniki, interventni programi, družina, starševstvo, duševno zdravje

## **Interventional programs of psychosocial support for children and minors in distress**

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As a basic cell of modern society, the family is exposed to increasing pressures and expectations, and therefore needs different forms of support. It is an important task of the state to maximize the social inclusion, protection and protection of children, adolescents. In order to achieve these objectives more effectively, the state has developed a network of interventional programs to support the family. The purpose of the paper is to present family support programs financed by the Ministry of Labour, Family, Social Affairs and Equal Opportunities. Programs are primarily aimed at children, adolescents and their families, whose goal is to improve mutual relationships and reduce emotional distress for children and adolescents. The content of the intervention programs is: helping children and minors deprived of adequate family life, preventing violence, helping victims of violence, various addictions, mental health, supporting children with special needs, social inclusion, etc. With these programs, we want to reduce inequality in the accessibility of such services and to establish mutual cooperation between different institutions, since for good results in the area of protection and protection of children and youth and their well-being, co-operative and effective cooperation between state bodies, local communities, non-governmental organizations and all other relevant stakeholders. It is important that the state recognizes the needs of different groups of children and designs or plans its policies by successfully responding to them.

**Keywords:** children / adolescents, intervention programs, family, parenting, mental health

## Šola v naravi za dolgotrajno bolne otroke

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Šola v naravi je za otroke pomembna ne zgolj zaradi učnih vsebin, temveč ima pomembno vlogo pri osamosvajjanju otroka ter socializaciji oz. odnosih s sošolci in učitelji. Dolgotrajno bolni otroci in njihovi starši se odhoda v šolo v naravi pogosto bojijo in predlagajo, da bi bil otrok takrat doma. Če se le da, poskusimo omogočiti, da se je udeležijo vsi učenci. Ključno je dobro sodelovanje učiteljev in staršev, ki naj šoli posredujejo napotke zdravnika, lahko tudi svoje predloge, saj oni najbolj poznajo svojega otroka. Dolgotrajno bolni otroci so namreč tisti, ki imajo dolgotrajno ali kronično bolezen ali motnjo, ki traja dalj časa kot tri mesece. Bolezni so si med sabo zelo različne, zato na vsakega otroka gledamo individualno. Kljub temu pa za večino veljajo skupne značilnosti: jemljejo zdravila, slabo se počutijo, imajo slabšo koncentracijo, hitro se utrudijo, daljše ali bolj naporne fizične aktivnosti ne zmorejo. Skupaj z dolgotrajno bolnim učencem naj gre dodatni učitelj spremlevalec, razrednik, specialni pedagog oz. nekdo, ki dobro pozna otroka. Ta prevzame skrb za zdravila, saj otroci v nedomači situaciji na ta pogosto pozabijo. Hkrati je otrokov zaupnik, oseba, na katero se otrok lahko kadar koli obrne, to pa počne čim bolj nevpadljivo, da otrok po nepotrebnem ne izstopa. Glede na zdravstvene posebnosti predhodno načrtuje vse aktivnosti in jih po potrebi prilagodi, zagotovi dodaten prevoz ali poskrbi za nadomestne dejavnosti.

**Ključne besede:** šola v naravi, dolgotrajna bolezen, prilagoditve

## **School camp for children with long-term illness**

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School camp is important for children not only because of learning contents, but also plays an important role in the independence of the child, socialization, relationships with classmates and teachers. Children with long-term illness and their parents are often afraid of going to school camp and suggest that the child would be at home at the time. If it is possible, all pupils should attend it. The key is the good cooperation between teachers and parents, who should provide medical reports to the school, and may also offer their own suggestions as they know their child most. Children with long-term illness are those who have a long-term or chronic illness or disorder lasting longer than three months. Diseases are very different to each other, so we look at each child individually. However, for most, common features are: taking medicines, feeling nausea, having lower concentration, quickly getting tired, cannot do longer or more strenuous physical activity. Child with long-term illness needs an additional assistant that is a class teacher or a special pedagogue, someone who knows the child well. He takes care of medicines, as children in a non-home situation often forget taking them. He is also the child's trustee, the person the child can turn to at any time, and makes it as unobtrusive as possible. Regarding his medical condition all the activities are planned in advance and adjusted if necessary, additional transport is provided or alternative activities are arranged.

**Keywords:** school camp, long-term illness, adaptations

## Vpliv ločitve staršev na otrokovo psihosocialno zdravje

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Ločitev je velika sprememba v življenju posamezne družine in njenih članov. Pogosto se z njo težko soočijo odrasli, kaj šele otroci. Število ločitev narašča, zato je pomembno spregovoriti tudi o otrocih katerih starši so ločeni. Prevečkrat so prav otroci in njihove potrebe, zaradi čustev odraslih, spregledani. V praksi je opaziti, da ločitev in posledice le-te vplivajo na psihosocialno in telesno zdravje otrok. Najbolj očitna sprememba ločitve je selitev (največkrat enega od staršev). Le-tej večkrat sledi sprememba finančnega stanja družine in življenjskega sloga otroka. Najmanj očitna posledica, toda zelo pomembna, pa je sprememba otrokovega čustvovanja. Otrok ob ločitvi izgubi občutek varnosti, dobi »dva doma« in starša, ki pogosto ne zmoreta medsebojne komunikacije. V otroku to vzbudi zmedo čustev (sram, jezo, občutek krivde, nezaupanje, razdvojenost...). Ob tem otrok potrebuje starša, ki zmoreta omogočiti prostor, kjer lahko izrazi vsa svoja čustva in je z njimi sprejet. Da pa lahko starša prepoznata čustvene potrebe otroka, morata biti senzibilna in odzivna nanj. Pri-spevec predstavlja oblike razbremenitve za otroke. Starša tudi po ločitvi oba ostajata starša in ohranjata starševsko skrb. Ločujeta se kot partnerja in ne kot starša. Od staršev je odvisno koliko in na kakšen način bosta svojo starševsko skrb uresničevala in na kakšen način bosta uredila novo družinsko življenje, ki mora biti ravno zaradi otrok, sporazumno in spoštljivo.

**Ključne besede:** ločitev, otrok, otrokove potrebe, psihosocialno zdravje, razbremenitev

## **The effect of parental divorce on the psychosocial health of children**

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Divorce is a life-changing event for a family and its members. Already adults have problems coping with it, let alone kids. Emotions of the adults often overshadow the kids and their needs remain overlooked. That is why it is important to speak up about kids who have experienced divorce of their parents. At work, we often see that divorce and its consequences affect kids' psychosocial and physical health. The most obvious change after divorce is moving. The financial situation also changes, as does the children's life style. Often hidden, but important, is the change in children's emotions and emotional behaviour. Divorce can have a negative effect on their sense of (emotional) safety, they start living in »two-homes« and their parents often cannot communicate any more. The children have to cope with different intense emotions – shame, anger, guilt, mistrust, separation, etc. In such situations, the children need parents who know how to create an environment, which allows the children to express their feelings and know how to accept them. For this to happen, the parents need to be sensible and responsive to their children's emotions and needs. The contribution presents ways of relief for children. Both parents despite divorce still have their parenting rights and they are still both parents. They are divorcing each other as partners, but not as parents. It is up to them how they will organize new family life for their children.

**Keywords:** divorce, children, children's needs, psychosocial health, relief for children

## **Novi »online« izzivi na področju zdravja mladostnikov v Sloveniji**

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**Uvod:** Stalne spremembe in vse več časa preživetega »online« imajo za posledico nove izzive in težave na področju zdravja med mladostniki. Namen študije je raziskati značilnosti novih tveganih »online« vedenj in simptomov zasvojenosti pri slovenskih mladostnikih.

**Metode:** V raziskavi smo uporabili slovenske podatke kvantitativne mednarodne presečne raziskave Z zdravjem povezan vedenjski slog iz leta 2018. Gre za reprezentativen vzorec všolanih 11-, 13-, 15- in 17-letnikov (n=7449). Podatke smo analizirali s programom SPSS 25, uporabili smo test hi-kvadrat in multivariatno logistično regresijo.

**Rezultati:** Preliminarni rezultati kažejo, da je v zadnjem času sodelovalo pri »online« trpinčenju 5,1 % mladostnikov, »online« trpinčenih pa je bilo 12,4 % (med njimi več fantov kot deklet in največ 15-letnikov). Približno petina mladostnikov se lažje »online« kot v živo pogovarja o svojih skrivnostih, občutkih in skrbeh, ki jih imajo (med njimi več fantov). Znake zasvojenosti s socialnimi omrežji kaže 8,3 % mladostnikov (med njimi več deklet), znake z računalniškimi igricami pa 10,2 % otrok in mladostnikov (med njimi več fantov). Ta vedenja in težave se pogosteje pojavljajo pri mladostnikih, ki so slabše ocenili socialno ekonomski položaj družine.

**Diskusija:** Podobno kot ugotavljajo raziskave v tujini, se tudi v Sloveniji pojavlja nova »online« tvegana vedenja in znaki novih oblik zasvojenosti. Ugotovitve so lahko izhodišče za načrtovanje javnozdravstvenih ukrepov.

**Ključne besede:** »online« vedenja, znaki zasvojenosti, mladostniki, novi izzivi

## **Health of Slovene adolescents - new challenges in the »online« world**

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**Introduction:** Fast technological changes and the increase in time spent »online« lead to new challenges affecting health behaviours and can result in health problems among children and adolescents. The aim of the study is to research some characteristics of new »online« risk behaviours and possible symptoms of addiction in adolescents in Slovenia.

**Methods:** Nationally representative sample of 11-, 13-, 15- and 17-year-old students ( $n=7449$ ) from the international, cross-sectional 2018 Health Behaviour in School-Aged Children research was used. Data were analysed using SPSS 25. Chi-square and multivariate logistic regression were conducted.

**Results:** Preliminary data show that 5.1% of children and adolescents were lately cyberbullying others and 12.4% were cyberbullied (more boys and more 15-year-olds). One fifth of adolescents (more boys) reported that they find it easier to talk about their secrets, feelings and worries »online« compared to »in vivo«. 8.3% of adolescents (more girls) reported signs of addiction with social media and 10.2% with online gaming (more boys). These behaviours were more prevalent in adolescents with lower self-rated socio-economic position of their family.

**Discussion and Conclusion:** Not only in other countries, but also in Slovenia new »online« risk behaviours and addictions are emerging. Results of the study may serve when planning public health interventions.

**Keywords:** »online« behaviours, symptoms of addiction, adolescents, new challenges

## Avtoritativni vzgojni stil blaži učinek zaznane diskriminacije na zdravje mladih

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**Uvod:** Starši igrajo pomembno vlogo pri zdravju in počutju svojih otrok. Pretekle študije so pokazale, da predvsem avtoritativni vzgojni stil prispeva k pozitivnemu razvoju otrok in mladostnikov. Ob tem imajo starševski stili tudi zaščitno vlogo pri negativnem vplivu različnih stresorjev na zdravje mladih. Eden takšnih stresorjev je doživljanje neenake oz. nepravične obravnave v posameznikovem družbenem okolju, tj. zaznavanje diskriminacije. Namenske raziskave je bil preučiti, 1) ali je avtoritativni starševski vzgojni stil povezan s subjektivnim zdravjem mladih in uporabo drog, 2) ali je zaznana diskriminacija (ZD) povezana s subjektivnim zdravjem in uporabo drog in 3) ali avtoritativni vzgojni stil blaži vpliv ZD na zdravje in uporabo drog.

**Metode:** Analizirali smo anketne podatke reprezentativnega vzorca slovenskih mladih (Slovenian Youth 2013), starih od 16 do 27 let (N = 907; 48,3 % žensk).

**Rezultati:** Avtoritativno starševstvo je povezano z boljšim zdravjem in manj pogosto uporabo drog. ZD ima statistično značilen negativen vpliv na zdravje, ne pa na uporabo drog. Ob tem avtoritativni vzgojni stil pogojuje učinek ZD na zdravje tako, da ga zmanjšuje.

**Zaključek:** Avtoritativni starševski vzgojni stil je pomemben zaščitni dejavnik v družini, ki izboljšuje zdravje in blaži negativne učinke stresorjev na zdravje mladih.

**Ključne besede:** starševski vzgojni stili, družinska socializacija, zaznana diskriminacija, subjektivno zdravje, uporaba drog

## **Authoritative Parenting Moderates the Impact of Perceived Discrimination on Health**

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**Introduction:** Parents play a crucial role in well-being of their children. Previous studies have indicated that authoritative parenting is especially conducive to healthy offspring development. In addition, parenting styles may also play a protective role in the negative impact of various children's stressors. One such stressor is the experience of not being treated fairly/equally in one's social environment, i.e., being discriminated against. The purpose of our study was to examine 1) whether authoritative parenting style impacts youth's subjective health and substance use; 2) whether perceived discrimination (PD) impacts subjective health and substance use; and 3) whether authoritative parenting moderates the impact of PD on health and substance use.

**Methods:** We examined survey data from a representative sample of Slovenian young people aged 16–27 in 2013 (Flere et al., 2014; N = 907; 48.3 % women).

**Results:** Authoritative parenting was associated with better health and less frequent substance use. In addition, PD had a significant negative impact on health, but not on substance use. Finally, authoritative parenting styles moderated the impact of PD on health by dampening the negative impact of PD on health.

**Conclusion:** Authoritative parenting is an important protective resource within the family that improves health of young people and reduces the impact of stressors on health.

**Keywords:** parenting styles, family socialization, perceived discrimination, subjective health, substance use

## Bolj tvegana souporaba psihoaktivnih snovi med mladostniki iz Slovenije

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**Uvod:** Souporaba psihoaktivnih snovi (PAS) v mladostništvu je povezana s številnimi negativnimi izidi. V Sloveniji imamo veliko podatkov o uporabi posameznih PAS, nimamo pa veliko podatkov o njihovi souporabi. Namen študije je ugotoviti prevalenco in značilnosti redne/bolj tvegane souporabe vsaj dveh PAS - tobaka, alkohola in konoplje - med všolanimi 15-letniki v Sloveniji. **Metoda:** Zajeli smo reprezentativen vzorec 15-letnikov iz Slovenije ( $N=1615$ ) iz mednarodne pregledne presečne raziskave HBSC, 2014. Ocenili smo prevalenco redne/bolj tvegane souporabe, z logistično regresijo pa raziskali dejavnike, povezane z njo. Rezultati: 39,7 % je poročalo o pogosti/bolj tvegani uporabi vsaj ene PAS, medtem ko je 14,7 % poročalo o pogosta/bolj tvegana souporaba vsaj dveh PAS. Ta uporaba se je povezovala z individualnimi (pogosto pretepanje), vrstniškimi (vrstniška uporaba PAS, večerno druženje s prijatelji vsak dan), šolskimi dejavniki (nižja zaznana šolska uspešnost), družinskimi dejavniki (manj pogosti družinski obroki) ter dejavniki življenjskega sloga (zgodnji spolni odnos, neredno zajtrkovanje, vsakodnevno pitje energijskih pijač). **Zaključek:** Glede na razsežnost problema predlagamo pripravo skupne nacionalne strategije za preprečevanje in zmanjševanje zasvojenosti in tveganij vedenj, ki bo zagotovila kontinuiranost učinkovitih preventivno-promocijskih programov.

**Ključne besede:** tobak, alkohol, konoplja, bolj tvegana souporaba, mladostniki, Slovenija

## **Hazardous polysubstance use in adolescents from Slovenia**

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**Introduction:** Polysubstance use in adolescence has many negative health outcomes. In Slovenia, data on single substance use are numerous; however, we lack data on polysubstance use. The aim of the study was to assess the prevalence and characteristics of regular/more hazardous polysubstance use of at least two psychoactive substances (HPU) - alcohol, tobacco, cannabis - among Slovene 15-year-old students. **Methods:** Nationally representative sample of 15-year-old students ( $n=1651$ ) from the Slovenian arm of the cross-national 2014 HBSC study was used. We assessed the prevalence of HPU and used logistic regression to explore factors associated with it. **Results:** 39.7% reported frequent/more hazardous use of at least one substance, while 14.7% reported HPU. HPU was associated with individual (frequent physical fighting), peer (peer substance use, spending evening time with friends daily), school (low perceived school performance), family (less frequent family meals) and life-style factors (early sexual intercourse, irregular breakfast, daily energy drinks consumption). **Conclusions:** The scope of the problem calls for immediate action. We propose the development of common national strategy on prevention and reduction of substance use and other risk behaviours to ensure continuous implementation of effective health promotion and prevention programmes.

**Keywords:** tobacco, alcohol, cannabis, hazardous polysubstance use, adolescents, Slovenia

## **Strategije spoprijemanja, zdravje in dobro počutje mladih v Sloveniji**

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**Uvod:** Strategije spoprijemanja z vsakdanjimi težavami so pomemben vidik posameznikovega odzivanja na družbeno okolje. Pretekle raziskave so pokazale, da se mladi v Sloveniji pri soočanju s problemi poslužujejo predvsem zatekanja k pomoči drugim, uporabljajo pa tudi proaktivno strategijo soočanja s problemi, nekateri pa tudi pasivnost/umik. Obenem so se v preteklih tujih raziskavah strategije spoprijemanja izkazale za pomemben dejavnik zdravja in počutja mladostnikov, vendar njihova vloga med mladimi v Sloveniji še ni bila sistematično analizirana. Namen pričujočega prispevka je preučiti ali so strategije spoprijemanja s težavami med mladimi v Sloveniji povezane z njihovim zdravjem oz. počutjem.

**Metode:** Analizirali smo anketne podatke reprezentativnega slovenskega vzorca raziskave Mladina 2010 mladih v starosti od 15 do 29 let. Preučili smo štiri kazalnike zdravja in dobrega počutja: samoocenjeno zdravje, zadovoljstvo z življenjem, pogostost doživljanja stresa in percepциjo smisla življenja.

**Rezultati:** Rezultati so pokazali, da sta strategiji umika in agresivnosti praviloma povezani s slabšimi izidi, medtem ko proaktivna strategija in pomoč drugih z izidi nista povezani.

**Razprava in zaključek:** Na podlagi rezultatov prispevek sklenemo s predlogi za nadaljnje raziskave, podamo pa tudi predloge možnih ukrepov za zaposlene, ki delajo z mlado populacijo in za starše mladostnikov.

**Ključne besede:** mladostniki, strategije spoprijemanja, zdravje, dobro počutje

## **Coping strategies, health and well-being of young people in Slovenia**

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**Introduction:** Coping with everyday problems is an important aspect of an individual's response to social environment. Past research indicated that young people in Slovenia deal with their problems mainly by seeking help of others, but they also employ proactive strategy, while some are passive and use avoidance strategy. In addition, previous research in other countries has shown that coping strategies are an important determinant of health and well-being of adolescents, although their role among young people in Slovenia has not yet been systematically examined. The purpose of our research was to examine whether coping strategies among young people in Slovenia are related to their health and well-being.

**Methods:** We analysed representative survey data of Slovenian sample from Youth 2010 study, consisting of young people aged 15-29. We examined four indicators of health and well-being: self-rated health, satisfaction with life, frequency of experiencing stress and the perception of meaning of life.

**Results:** Results showed that avoidance and aggression strategies were associated with poorer outcomes, while proactive strategy and the seeking help of others were not related with examined outcomes.

**Conclusion:** On the basis of our results, we provide future avenues of research, as well as several possible measures for those working with the young population and for youth's parents.

**Keywords:** young people, coping strategies, health, well-being

## **Škodljivi vplivi permisivne vzgoje na psihosocialni razvoj otrok in mladostnikov**

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Permisivna paradigma v vzgoji in vzgojno-izobraževalnem procesu v središče sveta odraslih (starši, vrtec, šola...) postavlja otroka. Vse se vrti okrog zadovoljevanja otrokovih želja in potreb. Posledice so različne in večplastne. Zaradi »vse po meri otroka« in poplavami obšolskih/obvrtčnih dejavnosti se danes srečujemo z generacijami zdolgočasenih, naveličanih in iztrošenih otrok/mladostnikov. Številne raziskave kažejo, da gre za generacije otrok z zelo nizko samopodobo, samozavestjo in samospoštovanjem, v resni eksistencialni krizi in krizi identitete, s številnimi duševnimi stiskami in boleznimi, ki so neopremljeni ter nepripravljeni na realno in osmišljeno življenje. V logoterapiji poznamo tri glavna simptomatična področja krize smisla: 1. agresija (na telesni in duševni ravni – do sebe in do drugega), 2. depresija in 3. različne vrste zasvojenosti (kemične in nekemične). Tovrstna simptomatika zaobjema skorajda vse vedenjske in duševne stiske sodobnega otroka/mladostnika.

Namen prispevka je, iz logoterapevtskega vidika, podati ključne vidike škodljivih vplivov permisivne paradigmе na duševno zdravje in celosten psihosocialni razvoj. Stroka namreč prepogosto otroka (reduktionistično) dojema, kot predvsem kognitivno/razumsko bitje in ne kot nedeljivo celoto telesne, duševne in duhovne razsežnosti. V Beli knjigi se sicer na nekaj mestih omenja celostni pristop vendar vsebina zajema zgolj minimalistično deklarativno-teoretično raven, ne pa konkretnje, praktične in izvedbene ravni.

**Ključne besede:** vzgoja, logoterapija, logopedagogika, duševno zdravje, psihosocialno zdravje

## **Harmful impact of permissive parenting on psycho-social development of child and youth**

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The permissive paradigm in parenting and the educational process puts the child in the epicenter of the adult world (parents, kindergarten, school ...). Everything turns around satisfying children's wishes and needs. The consequences are several and multi-layered. Due to the "child-shaped" and to many out-school activities, we are facing now days the generations of bored, tired and burned-out children / adolescents. Many studies have shown that these are generations of children with very low self-image, self-esteem and self-respect, in a serious existential and identity crisis, with high psychological distress and illnesses, being unfit and unprepared for real and thoughtful life. In Logotherapy there are three different symptomatic areas of crisis of sense (meaning): 1. aggression (at physical or psychical level – toward itself or toward other), 2. depression and 3. different forms of addiction (chemical and un-chemical). Such symptomatic comprises almost all behavioral and spiritual distress of modern child/youngster.

The main purpose of this paper is to show, from the logoterapeutic point of view, the key aspects of the harmful impact/effects of the permissive paradigm on mental health and overall psychosocial development. Too often the child is perceived reductionistically as mostly cognitive / rational being, and not as an indivisible whole of the physical, mental and spiritual dimensions. In the »White Book«, the holistic approach is mentioned at several places, but the content covers only the minimalist declarative-theoretical level, instead of the concrete, practical and the pragmatic one.

**Keywords:** parenting, logotherapy, logo-pedagogy, mental health, psycho-social health

## Skrb za psihosocialno zdravje otrok ob pričetku šolanja

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V prispevku je predstavljen način dela, ki najmlajšim udeležencem v osnovni šoli, prvošolcem, omogoča učenje, usklajeno z njihovo razvojno stopnjo, zmožnostmi in potrebami. Na OŠ Vojke Šmuc že vrsto let izvajamo elemente pedagogike montessori, katere vodilni motiv je »Pomagaj mi, da naredim sam«. Metoda se imenuje po Mariji Montessori, italijanski zdravnici in borki za pravice otrok. Učilnica je spodbudno učno okolje, na voljo je veliko didaktičnih pripomočkov z različnih predmetnih področij. Otrok potrebuje aktivnosti v okolju, uči se tako, da rokuje z materialom, uporablja čute in se giblje. Po pedagoški montessori povzemamo tudi vaje za socializacijo. Pravila obnašanja predstavljamo preko igre vlog, otrok vstopi v stik s pravili in se počasi in spontano uči spoštljivega in vladnega obnašanja. Spore rešujemo sproti, otroke učimo strategij reševanja nesoglasij, poslužujemo se konkretnih pripomočkov (fotografije, torbica prijateljstva). Tudi preverjanje in ocenjevanje znanja poteka upoštevajoč potrebe otrok. Znanje preverjamo sproti, učence opazujemo pri delu in si zapisujemo napreddek. Standarde znanja dosegajo postopoma, individualizirano. Ugotavljamo, da z izvajanjem alternativnih načinov dela, dosegamo dobre rezultate. Učenje je bolj sproščeno, več časa je za diferenciacijo in individualizacijo in pozornejši smo na čustvena stanja otrok.

**Ključne besede:** pedagogika montessori, socializacija, formativno spremljanje znanja, prvošolci

## **The care of psychosocial health of children at the beginning of schooling**

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The purpose of this paper is to present the method of work, which enables learning to the youngest participants of the elementary school, consistent with their developmental stage abilities, and needs. At the Vojka Šmuc Elementary School, we have been performing the elements of the Montessori pedagogy for a series of years. The method is named after Maria Montessori, an Italian doctor and fighter for the rights of children. The leading motif is "Help me to do it myself". The classroom is an encouraging learning environment. There are a lot of didactic accessories. A child needs activities, they learn so that they handle the materials and use senses. The Montessori pedagogy is also used to help plan the socialization exercises. We act the rules of behavior, a child engages the rules and spontaneously learns respectful and polite behavior. Conflicts are solved regularly. Children are taught the strategies of conflict solving with the assistance of concrete accessories (photographs and a purse of friendship). The assessment of knowledge and grading is also performed with respect to the needs of children. Knowledge is tested regularly. We watch students at work and write down the progress. Standards of knowledge are achieved gradually, in an individualized manner. We are ascertaining that with the use of alternate ways of teaching, we are receiving good results. The learning process is relaxed, there's more time to perform differentiation and individualization.

**Keywords:** Montessori pedagogy, socialization, formative assessment of the knowledge, first-grade students

## Čuječnost kot način za zmanjševanje stresa za otroke s posebnimi potrebami

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Z negativnimi posledicami stresa se danes srečujejo ne samo odrasli, ampak tudi otroci in mladostniki, še posebej tudi otroci s posebnimi potrebami. Namen povzetka je pokazati, da je za lažje soočanje s stresom otrokom s posebnimi potrebami pomembno razvijanje čuječnosti. Stresorjem ne moremo ubežati, lahko pa se jih naučimo prepoznavati in poskušamo stres zmanjševati. Na podlagi strokovne literature in lastne prakse vadbe čuječnosti sem za učence s posebnimi potrebami oblikovala enostavne vaje (5–10 minut): Zmajevo dihanje, Čuječe opazovanje, Čuječnost 5-4-3-2-1, Čuječno uživanje hrane, Kozarec hvaležnosti in Seznam petih dobrih lastnosti. Vaje sem izvajala z učenci individualno, na začetku ur. Vključenih je bilo 14 učencev, starih od 10 do 14 let. Kmalu je bilo pri učencih mogoče zaznati nekatere pozitivne učinke (višja stopnja po-mirjenosti, pozornosti in koncentracije ter hvaležnosti). Učenci so pokazali tudi radovednost in interes za nadaljnje vaje čuječnosti. Ker je bilo že po dveh mesecih mogoče prepoznati nekatere pozitivne učinke vaj, menim, da je potrebno vaje čuječnosti vključevati in razvijati v okviru rednega pedagoškega dela. Strokovnjaki iz ameriškega programa Čuječnost v šolah (MindUp) poudarjajo, da je potrebno vsaj 5 minut dvakrat dnevno, da učenci razvijejo nekatere čustvene in socialne veščine za doseganje višje stopnje odpornosti pred stresorji in posledično višjo stopnjo zadovoljstva z življanjem.

**Ključne besede:** čuječnost, stres, otroci s posebnimi potrebami, učinki čuječnosti

## **Mindfulness as a means of stress reduction for children with special needs**

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Not only adults but also children and teenagers, especially children with special needs suffer from stress. Aim of the summary is to show, that the development of mindfulness is important for children with special needs. We cannot escape stressors, but we can recognize them and try to reduce stress. On the basis of professional literature and own mindfulness practice, I prepared for children with special needs several simple mindfulness exercises (5–10 minutes): Dragon's breathing, Mindful watching, Mindfulness 5-4-3-2-1, Mindful eating, The glass of gratitude and List of five strengths. I did exercise with a child individually, at the beginning of the lessons. 14 children were included, in the age from 10 to 14. Some benefits (higher levels of calmness, attention, concentration, and gratitude) can be discerned soon. Children showed curiosity and interest in additional exercises of mindfulness. Some positive effects of mindfulness were discerned early (after 2 months of practice). So I mean, that it is necessary to incorporate and develop exercises of mindfulness in educational work. Professionals of American programme for Mindfulness in schools (MindUp) emphasize, that it is useful to set aside five minutes twice a day that children can develop stronger resilience against stressors, reduce levels of stress and achieve higher levels of satisfaction with life.

**Keywords:** mindfulness, stress, children with special needs, benefits of mindfulness

## Izbrane duševne motnje med športno aktivnimi in neaktivnimi mladostniki

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**Uvod:** Med pomembnejše varovalne dejavnike psihičnega in telesnega zdravlja mladostnikov sodi telesna aktivnost. Športno aktivni mladostniki so lahko izpostavljeni večjemu stresu, zaradi pogostih treningov, pričakovanjem okolice in pomanjkanju prostega časa. Vsi tej dejavniki lahko potencialno povečajo njihovo dovzetnost za pojavnost težav v duševnem zdravju.

**Metode:** V raziskavi je sodelovalo 38 mladostnikov, 28 kategoriziranih športnikov in 12 športno neaktivnih (13 moških in 25 žensk, povprečna starost 17,29 SD=1,431). Uporabili smo uvodni vprašalnik, vprašalnik o depresivnosti, anksioznosti, motnjah hranjenja in stopnji tveganosti pitja alkohola.

**Rezultati:** Statistično razlika je v porabi alkohola in stopnji tveganosti pitja. Mladostniki, ki se ne ukvarjajo s športom bolj tvegano piyejo in konzumirajo več alkohola. V drugih pokazateljih duševnega zdravja ni bilo statistično pomembnih razlik. Zaskrbljujoče je, da mladostniki, ne glede na športno udejstvovanje, v povprečju poročajo o visoki stopnji depresivnih simptomov. Mladostniki poročajo o manj simptomih kot mladostnice.

**Razprava in zaključek:** Udejstvovanje v športu je lahko varovalni dejavnik za nekatere težave v mladostništvu, kot je uživanje alkohola. Mladostniki in mladostnice, ne glede na športno udejstvovanje poročajo o povišani depresivni simptomatiki. Dekleta so ranljivejša skupina za stiske in stres in z njim povezane negativne posledice za zdravje, kot so simptomi depresije, anksioznosti in motenj hranjenja.

**Ključne besede:** mladostniki, tesnoba, depresija, motnje hranjenja, alkohol

## **Selected mental disorders amongst competitively active and inactive youth**

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**Introduction:** One of the most important factors of maintaining mental and physical health is physical activity. Young athletes can be exposed to high levels of stress, especially due to many trainings, high expectations and lack of leisure time. These factors can heighten susceptibility to problems in mental health.

**Methods:** 38 adolescents participated in the research. 28 sport active, 12 sport inactive (13 males and 25 females, average age 17,29 SD=1,431). We utilized an introductory questionnaire, questionnaire about depressions, anxieties, eating disorders and the level of risk of drinking alcohol.

**Results:** Statistically relevant differences are in alcohol consume and the risk levels of drinking alcohol. Sport inactive adolescents take higher risks drinking and drink larger amounts of alcohol. There was no statistically important differences in the other indicators. It is alarming that many adolescents report a high number of depression symptoms regardless of being involved in sports. Male adolescents show less symptoms of depression in comparison to the female candidates.

**Discussion and conclusion:** Being involved in sports can be a preventive measure towards some problems in the adolescent age, such as consuming alcohol. The youth has reported elevated numbers of depression symptoms regardless of involvement in sports. It has been noticed that female are more susceptible to stress and accompanying health problems, such as depression, anxiety and eating disorder.

**Keywords:** youth, anxiety, depression, eating disoreders, alcohol

## Otroci, mladostniki in alkohol

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Škodljiva raba alkohola že vsaj štirideset let predstavlja enega največjih javnozdravstvenih problemov na svetu. Za Slovenijo je značilna »mokra kultura«, kar pomeni, da je uživanje alkohola del (vseh) pomembnih življenjskih situacij. Obdobje otroštva in mladostništva je najbolj ranljivo za učinke in posledice alkohola, predvsem ob visokih koncentracijah etanola. Možgani predstavljajo enega glavnih tarčnih organov, alkohol s toksičnim učinkom deluje tudi na centralni živčni sistem ter v odvisnosti glede na koncentracijo in trajanje izpostavljenosti povzroča kratkotrajne in dolgotrajne učinke. Izpostavljenost alkoholu v otroštvu in mladostništvu predstavlja tveganje za težave kasneje v življenju, tako lahko vodi v sindrom odvisnosti od alkohola ali razvoj drugih duševnih motenj. Po podatkih NIJZ je bil v Sloveniji v obdobju 2011-2015 med hospitalizacijami mladostnikov v starosti 15-19 let zaradi zastrupitev z zdravili in snovmi nemedicinskega izvora najpogosteji vzrok hospitalizacije prav zastrupitev z alkoholom pri dobri polovici (ni bilo razlik med spoloma) in pri skoraj tretjini starejših šolskih otrok v starosti 10-14 let (več fantov). Zdravniki in drugo zdravstveno osebje smo dolžni pomagati našim pacientom, da lahko povedo, kaj jih teži, in da zmorejo na naša vprašanja odgovoriti na način, ki nam olajša diagnostične postopke in izdelavo ustreznegra načrta obravnave.

**Ključne besede:** alkohol, javno zdravje, otroci in mladostniki

## **Children, adolescents and alcohol**

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Alcohol abuse presents one of the biggest public health problems in the world in the last 40 years. Slovenia has a »wet culture« where alcohol use is a significant component of (every) important life event. Childhood and adolescence are the most vulnerable for alcohol related acute and long-term effects. The main target organ is the brain, also the rest of the central nervous system and other organs suffer from toxic effects of alcohol. Exposure to alcohol during childhood and adolescence increases the risk for addiction and other mental health disorders later in life. According to the Slovenian National Institute for Public Health data from 2011 to 2015 roughly one half of hospitalizations for intoxication in adolescents age 15-19 years were due to alcohol (no gender differences) and about one third in children age 10-14 years (more boys). Medical doctors and other health professionals are responsible for creating safe and trustworthy atmosphere during the patients' visit, in which honest conversation is supported while preserving patients' dignity. To motivate the parents is extremely important when working with children and adolescents. Motivational interview helps to gain relevant history and results in a personalized treatment plan within treatment program opportunities.

**Keywords:** alcohol, public health, children and adolescents

## **Učniki terapevtskih taborov za otroke in mladostnike s posebnimi potrebami**

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**Uvod:** Terapevtski tabori so namenjeni fizični in psihosocialni podpori pri razvoju otrok in mladostnikov z različnimi posebnimi potrebami. Usmerjeni so specifično in različno prilagojeni glede na obolenje udeležencev tabora.

**Metode:** Uporabljena je bila deskriptivna metoda dela s kritičnim pregledom slovenske in angleške literature, objavljene v obdobju od leta 2009 do 2019. Literaturo smo s pomočjo ključnih besed iskali v podatkovnih bazah CINAHL, Medline, ScienceDirect, dostopnih preko mrežnika DiKUL.

**Rezultati:** Aktivnosti, ki se izvajajo na taborih so tako terapevtske kot tudi zabavne narave, imajo blagodejen učinek na psihično in fizično počutje otrok in mladostnikov ter jim obenem pomagajo tudi pri socializaciji. Udeleženci taborov lahko v varnem okolju izkusijo nova doživetja, gradijo na samostojnosti in zmanjšajo občutek stigme in drugačnosti, ki jih spremišča v vsakodnevnu življennju.

**Razprava in zaključek:** Terapevtski tabori so izjemno koristni, saj so posebej usmerjeni v otrokove ali mladostnikove posebne potrebe in izzive, s katerimi se soočajo v vsakdanjem življenju. Njihovim potrebam so prilagojene vse aktivnosti, od prostorov kjer se gibajo, do dnevnih aktivnosti, s poudarkom na učenju umirjenosti, sobivanja, skrbi zase in ostalim potrebam otroka ali mladostnika. Nudijo jim občutek pripadnosti, saj so v času tabora del skupine, katere člani se srečujejo s podobnimi vsakodnevнимi izzivi.

**Ključne besede:** terapevtski tabori, posebne potrebe, otroci, mladostniki, psihosocialni razvoj

## **The effects of therapeutic camps for children and youth with disabilities**

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**Introduction:** Therapeutic camps are conducted to foster the physical and psychosocial development of children and youth with a wide range of disabilities. The camps have been designed for a variety of purposes.

**Methods:** The descriptive research method with a critical review of Slovene and English professional and scientific literature was used. The review was restricted to studies published since 2009 to 2019. Bibliographic databases CINAHL, Medline and ScienceDirect have been searched.

**Results:** The activities are therapeutic as well as enjoyable, which has effect on mental and physical well-being and encourages social skill development. The camps provide to the children and youth a unique opportunity to socialise, expand their social networks, and develop a sense of belongingness. A safe environment provides new experience, encourages their independence, and enables them to effectively combat the stigma.

**Discussion and conclusions:** Therapeutic camps are extremely beneficial since they target the specific needs and challenges facing the daily existence of children with disabilities. All the activities are adapted to the needs of the participants, including outdoor activities, activities of daily living, while special emphasis is placed on the instruction in appropriate relaxation techniques, co-existence and self-care. The activities promote a sense of belongingness since the participants are integrated into a group of individuals whose members face similar daily challenges.

**Keywords:** therapeutic camps, disabilities, children, youth, psychosocial development

## Kakovost življenja mladih nemirnežev

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**Uvod:** Težaven otrok je pogosto stigmatiziran s strani različnih strokovnjakov in staršev. Na vedenje poleg priučenih vplivajo tudi prirojene vedenjske in čustvene značilnosti in lastnosti otroka ali pa odraz različnih bolezenskih stanj. Neustrezno vedenje vpliva na kakovost življenja otrok. Želeli smo ugotoviti kakovosti življenja otrok, ki so vedenjsko zahtevni.

**Metode:** Za anketiranje je bil uporabljen Vprašalnik prednosti in težav za otroke med 4 in 17 let starosti na poletnem taboru 2017 otrok s čustvenimi in vedenjskimi težavami. Vključenih je bilo 66 otrok starih med 7 in 15 let.

**Rezultati:** Vključeni otroci so na področju čustvovanja dosegli povprečno 3,88 točk; na področju vedenjskih težav 4,48 točk; na področju hiperaktivnosti 4,67 točk; na področju medvrstniških odnosov 4,20 točk in na področju prosocialnega vedenja 7,12 točk. Skupno so dosegli 17,22 točk na področju težav.

**Diskusija:** Glede na 4-delno SDQ kategorizacijo vedenja so otroci dosegli na področju čustvovanja rahlo nad normalno število točk, rahlo povišano do visoko število točk na področju vedenjskih težav, ne izstopajo kot hiperaktivni, imajo rahlo povišano do visoko število točk na področju medvrstniških odnosov in ustrezno prosocialno vedenje. Povprečno skupno število točk na področju vedenjskih težav je visok, kljub temu, da imajo nekateri otroci simptomatsko terapijo. Ob naraščanju vedenjskih in čustvenih motenj je potrebno dodatno raziskovanje in interdisciplinaren pristop.

**Ključne besede:** medicinske sestre, težavni otroci, SDQ, poletni tabor

## **Quality of life of restless youth**

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**Introduction:** A difficult child is often stigmatized by various experts and parents. Besides the child learned characteristics, a significant influence on their behaviour is caused by birth given emotional and behavioural features and/or medical issues. The inappropriate behaviour greatly affects the quality of the children's lives. We wanted to assess the quality of life of the behaviourally difficult children.

**Methods:** We used the Strength and Difficulties Questionnaire (SDQ), meant for children between the ages 4 and 17, who attended a camp in summer 2017, for children with emotional and behavioural problems. There were 66 participants between ages 7 and 15.

**Results:** The participating children achieved the average of 3,88 points on emotional problems scale, 4,48 on conduct problem scale, 4,67 on hyperactivity scale, 4,20 on peer problems scale, 7,12 in prosocial scale and on total difficulties score 17,22 points.

**Discussion and Conclusion:** Based on the 4-part SDQ categorization of behaviour, the children achieved slightly above normal amount of points in the area conduct problem scale, slightly to highly above normal amount in behavioural difficulties, normal in hyperactivity, slightly to highly above in peer relations and normal in prosocial behaviour. The sum of the scores is high, given the fact that some of the children undergo symptomatic treatment. With the increase of behavioural and emotional difficulties, it is important to research and take interdisciplinary approach.

**Keywords:** nurses, difficult children, SDQ, Summer camp

## Vpliv psihosocialnih intervencij na rezilientnost zlorabljenih otrok

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**Uvod:** Negativne izkušnje otroka v zgodnjem otroštvu, kot je zloraba v družini, vplivajo na njegov biološki in psihološki sistem ter razvoj. Le-te se kažejo kot kratkoročne in dolgoročne vedenjske ter duševne težave.

**Metode:** Uporabljen je bil pregled obstoječe znanstvene in strokovne literaturе v slovenskem, hrvaškem in angleškem jeziku, med leti 2008 in 2019. Iskanje je bilo opravljeno v slovenski bazi podatkov COBIB.SI in v tujih podatkovnih bazah Academic Search Complete, CINAHL, SAGE Journals Online, Science Direct ter PubMed.

**Rezultati:** Rezilientnost na stres je kompleksen večdimenzionalni konstrukt. Čeprav ne obstaja splošno sprejeta definicija oziroma opredelitev rezilientnosti, se razume kot sposobnost, da se posameznik vrne iz stiske / travme. Le malo je literature, ki se ne bi osredotočala le na način pristopa oziroma intervencij, temveč tudi na ustreznost in kakovost teh intervencij. Prav tako je pre malo pozornosti namenjene raziskovanju, kako različne intervencije in odločitve vplivajo na otroke, na njihovo vedenjsko in duševno zdravje.

**Razprava in zaključek:** Na otrokovo stopnjo rezilientnosti vplivajo tako podporni stebri kot tudi kakovost intervencij. Obravnava dejavnikov kot so revictimizacija, daljše obdobje med prvim in zadnjim prijavljenim primerom trpinčenja in starost na prvem oziroma ob zadnjem prijavljenem incidentu, so se izkazali kot pomembni napovedovalci pri doseganju omenjene stopnje.

**Ključne besede:** zloraba otrok, rezilientnost, psihosocialne posledice, intervencije

## **The influence of psychosocial interventions on resilience of abused children**

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**Introduction:** Negative experiences in early childhood, such as family abuse, affects children's biological and psychological system and also their development. Consequences are shown in short- and long-term behavioral and mental problems.

**Methods:** The existing scientific and professional literature was reviewed. We focused on current literature in Slovene, Croatian and English language, between 2002 and 2019. The search was done in the Slovene database COBIB.SI and in foreign databases such as Academic Search Complete, CINAHL, SAGE Journals Online, Science Direct and PubMed.

**Results:** Resilience to stress is a complex multidimensional construct. There is little literature that would not only focus in the approach on interventions, but also on the relevance and quality of these interventions. Lack of attention is also devoted to exploring how different interventions and decisions affect children's behavioral and mental health.

**Discussion and conclusion:** Supporting pillars and high quality interventions, are the most important for achieving great level of children's resilience. Revictimization, a longer period between first and last reported incident of maltreatment and consequently the age at first and age at last reported incident, were significant predictors of mentioned degree.

**Keywords:** child abuse, resilience, psychosocial impact, interventions

## Pojavnost tveganih vedenj med dijaki 3. letnikov na Goriškem

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**Uvod:** Mladostništvo je obdobje velikih sprememb, ko posameznik išče nove izkušnje in ob graditvi lastne identitete eksperimentira tudi z različnimi oblikami tveganih vedenj. Namen prispevka je raziskati kajenje tobaka, uporabo alkohola in marihuane med dijaki 3. letnikov na Goriškem glede na vrsto šole. Povzetek je nastal na osnovi magistrskega dela.

**Metode:** Strategija raziskovalnega dela je bila presečna študija, vzorčenje pa naključno. Raziskovalno populacijo predstavljajo dijaki 3. letnikov različnih smeri srednjih šol na Goriškem. Ustrezno izpolnjenih anket, vključenih v analizo, je bilo 419. Kot merski instrument je bil uporabljen del vprašalnika iz raziskave Health behaviour in school-aged children – Z zdravjem povezana vedenja v šolskem obdobju med mladostniki v Sloveniji ter demografski podatki. Za statistično analizo podatkov je bil uporabljen statistični program SPSS 23.0, in sicer univariantna statistika in bivariantne statistične metode.

**Rezultati:** Rezultati so pokazali, da 8,6 % dijakov kadi tobak vsak dan. 12, 9 % dijakov je bilo pijanih več kot desetkrat. Pri starosti 16 let in več je 20 % dijakov prvič poskusilo konopljo. Med dijaki različnih srednjih šol so se pokazale statistično značilne razlike glede pogostosti kajenja ( $\chi^2 = 14,537$ ;  $p = 0,024$ ) in pitja alkoholnih pijač ( $\chi^2 = 16,951$ ;  $p = 0,031$ ).

**Razprava in zaključek:** Raziskava je pokazala, da se med dijaki 3. letnikov na Goriškem pojavljajo različna tvegana vedenja, ki so povezana z obiskovanjem različnih vrst šol. Medicinska sestra lahko z izvajanjem kontinuiranih zdravstvenovzgojnih delavnic močno prispeva k osveščanju negativnih vplivov tveganih vedenj ter spodbujanju k zdravemu preživljjanju prostega časa.

**Ključne besede:** mladostnik, kajenje tobaka, kajenje marihuane, pitje alkoholnih pijač

## **Risk behaviours among 3rd grade secondary school students in the region of Goriška**

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**Introduction:** Adolescence is a period of great changes that force individuals to seek different experiences. By experimenting, they often engage themselves in risk behaviours, all along building their own identity. The purpose of the article is to search out different factors that have to do with smoking tobacco, alcohol consumption and smoking cannabis among 3rd year secondary school students in the Goriška region regardless of the type of school they attend. The abstract was based of Master's thesis.

**Methods:** This is a cross-sectional study, sampling was random. The researched population are 3rd graders of different secondary schools in the region of Goriška. Appropriately filled up questionnaires used for the analysis accounted to 419. The instrument we used was part of the questionnaire from the research Health behaviour in school-aged children. It deals with health-related behaviour in the school-aged children in Slovenia and demographic data. We used SPSS 23.0 programme, using univariate and bivariate statistics.

**Results:** The results have shown that 8.6 % of students smoke on a daily basis. 12.9 % of the students have been drunk more than ten times. Aged 16 and more 20 % of the students have tried cannabis for the first time. Among the pupils of different secondary schools statistically significant differences have come up in regards to the frequency of smoking ( $\chi^2 = 14,537$ ;  $p = 0,024$ ) and alcohol consumption ( $\chi^2 = 16,951$ ;  $p = 0,031$ ).

**Discussion and conclusions:** The research has shown that risk behaviours are present among 3rd year secondary school students and that they are connected to the type of school they attend. Through regularly, based health-related workshops carried out by a nurse a great deal can be done towards raising awareness about the negative influences that risk behaviours necessarily exert as well as promoting the importance of healthy spare time activities.

**Keywords:** adolescent, smoking tobacco, smoking cannabis, alcohol consumption



**Sekcija/Section**  
**Prehrana otrok in mladostnikov**  
**Nutrition of children and adolescents**

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## **Vabljeno predavanje Invited lecture**

### **Sodobni vidiki motenj hranjenja**

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Motnje hranjenja, skupina bolezni, ki je bila do pred kratkim znana le ozkemu krogu strokovnjakov, je v zadnjih desetletjih prerasla v bolezen moderne dobe. Motnje hranjenja predstavljajo pomemben javno zdravstveni problem. Vzroke za nastanek motenj hranjenja lahko razdelimo na tri velike skupine: biološko – genetsko, socio – kulturno in družinsko. Večinoma gre za prepletanje vzrokov iz vseh treh skupin. Med motnje hranjenja uvrščamo: anoreksijo nervozo, bulimijo nervozo, kompulzivno prenajedanje in novejše oblike (ortoreksija in bigoreksija nervosa). Prepričanje, da za motnjami hranjenja najpogosteje zbolijo le mlajše osebe iz urbanih okolij, je zmotno. Ključni dejavnik uspešne obravnave oseb z motnjo hranjenja je lastna motivacija za zdravljenje. Najuspešnejši terapevtski pristop je psihoterapija, uporablja se predvsem vedenjsko – kognitivno in/ali razvojno – dinamsko psihoterapijo, po potrebi v kombinaciji s psihofarmakoterapijo. Obravnava je lahko ambulantnega ali bolnišničnega tipa. Ozdravitev ne pomeni le odsotnost simptomov posamezne motnje hranjenja, temveč tudi ustrezno psihosocialno funkcioniranje.

**Ključne besede:** motnje hranjenja, anoreksija nervosa, bulimija nervosa, kompulzivno prenajedanje, obravnava

## **Eating disorders - modern perspective**

Karin Serneč

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Until recently, eating disorders were a group of chronic mental disorders known only to a limited circle of professionals. Today, eating disorders are recognised as a significant contemporary medical problem in our society, even a public health issue. The etiological background of eating disorders is comprised of three major segments: biological/genetic factors, socio-cultural factors and family environment. In most cases, there is a considerable overlap between these three. Eating disorders constitute: anorexia nervosa, bulimia nervosa, binge eating disorder and recently emerged entities (orthorexia and bigorexia nervosa). Contrary to popular belief, eating disorders affect persons of all ages, genders and economic backgrounds. A key factor in successful outcome of an eating disorder is the patient's own motivation for treatment. One of the most successful treatment approaches is psychotherapy, especially cognitive-behavioral, developmental-analytic and family psychotherapy. Pharmacotherapy is indicated in cases of comorbidity and is used as needed. The first line of treatment is on an outpatient basis. If that proves insufficient, an inpatient psychotherapeutic treatment is indicated. Recovery is not merely an absence of specific eating disorder symptoms, it means adequate psychosocial functioning.

**Keywords:** eating disorders, anorexia nervosa, bulimia nervosa, binge eating disorder, treatment

## **Predstavitev izvedbe programa družinske obravnave debelosti**

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Program Družinska obravnava debelosti je nova intervencija, ki sistematicno prepoznavajo, ter obravnava in obvladuje čezmerno prehranjenost in debelost otrok, ter otroke z zmanjšano telesno zmogljivostjo. Program je namenjen otrokom 3. razredov in mladostnikom 6. razredov z debelostjo in njihovim staršem. Vodja pilotnega programa je bil izbrani projektni pedijater, koordiniranje in usklajevanje aktivnosti med člani tima pa je prevzela diplomirana medicinska sestra. Vloga dietetičarke je bila ozavestiti dosedanje prehranjevalne navade in vedenja otrok in njihovih staršev, ter postopno spremembo teh. Da so družine podane vsebine uspešno vnašale v svoj vsakdan, je pri tem imela pomembno vlogo psihologinja, katera je z vsebinami svojih srečanj podprla vsebine dietetičarke. Naloga psihologinje v timu je bila prvenstveno motivacijske narave. Kineziolog je opredelil izhodišča načrta telesne dejavnosti, ki so zajemala vrsto, intenzivnost, trajanje in pogostost aktivnosti. Poleg redne obravnave v telovadnici smo celotni družini ponudili dodaten termin vodene vadbe na prostem, ki je do sprememb življenjskega sloga pripeljala tudi starše in druge bližnje sorodnike. Uveljavitev programa v redno izvajanje bi bil dober doprinos za ohranjanje in krepitev zdravja otrok in mladostnikov, ter zmanjševanja prekomerne prehranjenosti in debelosti in z njo povezanih kroničnih nenalezljivih bolezni.

**Ključne besede:** debelost otrok, družinska obravnava, krepitev zdravja, multidisciplinarni tim

## **Presentation of programme for family treatment of the reduction of obesity**

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The new intervention Programme for Family Treatment for Reducing Obesity systematically recognizes, and treats the masters of over-nutrition in obesity of children, and children with reduced physical capacity. The programme is intended for children of the 3rd grade in adolescents of 6th grade with obesity signs, and their parents. The paediatrician was the selected as the pilot programme leader of the project, while the co-ordination of activities among the team members was taken over by a nurse. The dietitian planned the content of the workshops according to the Family Treatment Manual to reduce the risk of obesity. The psychologists played an important role in contributing information successfully to families in their everyday life, which supported the dietitian's role. The psychologist's task in the team was primarily motivational. Kinesiologist was to describe the amount of activity and the degree of physical development. The starting points of the physical activity plan were also defined, covering the type, intensity, duration and frequency of activities. The enforcement of the programme in a regular implementation would be a good contribution to the preservation and strengthening of the health of children and adolescents, which would reduce the risk.

**Keywords:** family treatment, health promotion, multidisciplinary team, obesity

## **Vpliv tabora »Moj Izziv« na spreminjanje prehranjevalnih navad v družini**

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**Uvod:** Neukrepanje ob pojavu povišane telesne mase v otroštvu najpogosteje vodi do pojava debelosti v odrasli dobi. Prehranjevalne navade in življenjski slog staršev vplivajo na razvoj prehranjevalnih navad otrok ter izvajanju telesne aktivnosti. Spremljali smo proces spremicanja prehranjevalnih navad otrok ter enega izmed njihovih staršev v okviru programa »Moj izziv«.

**Metode:** V raziskavo je bilo vključenih 16 otrok ter eden izmed njihovih staršev. Spremljali smo spremicanje telesne sestave od začetka programa ter po 6 ih mesecih. Z uporabo anketnih vprašalnikov o pogostosti uživanja živil in prehranjevalnih navadah smo spremljali spremicanje prehranjevalne navade pred in po vstopu v program Moj izziv.

**Rezultati:** Večini otrok je uspelo zmanjšati delež telesne mašcobe in ohraniti in povečati delež puste telesne mase. Pri spremicanju prehranjevalnih navad so tako starši kot otroci uvedli najmanj dve sprememb v vsakodnevni prehrani.

**Razprava in zaključek:** Program »Moj izziv« je primer uspešne prehranske intervencije pri spremicanju prehranjevalnih navad znotraj družine in preprečevanju otroške debelosti.

**Ključne besede:** prehranjevalne navade, prehranska intervencija, otroška debelost, družina

## **The impact of the "My Challenge" program on changing eating habits in the family**

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**Introduction:** Inaction in the presence of an increased weight during childhood often leads to obesity in adulthood. Eating habits and lifestyle of parents influence eating habits and physical activity of children. We followed the process of changing the eating habits of children and one of their parents within the "My Challenge" program.

**Methods:** The study included 16 children and one of their parents. We monitored the changes in body composition from the beginning of the program and after 6 months. Using survey questionnaires on the frequency of food consumption and eating habits, we examined eating habits before and after entering the "My Challenge".

**Results:** Most children managed to reduce the proportion of body fat and retain or increase the proportion of lean body mass. In changing eating habits, both parents and children have introduced at least two changes in daily diet.

**Discussion and conclusion:** The "My Challenge" program is an example of a successful nutritional intervention in changing dietary habits within the family and preventing childhood obesity.

**Keywords:** dietary habits, nutrition intervention, childhood obesity, family

## Vpliv črevesne mikrobiote in probiotikov na zdravje otroka

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Črevesna mikrobiota je kompleksen ekosistem več kot  $10^{14}$  mikroorganizmov, ki sobivajo v simboličnem odnosu z gostiteljem in imajo pomembno zaščitno, strukturno in presnovno vlogo. Tako po rojstvu črevesno sluznico naselijo mikroorganizmi, ki izvirajo predvsem iz črevesnega in vaginalnega trakta ter kože matere. Sestava mikrobiote se oblikuje v zgodnjem otroštvu do starosti treh let in je odvisna od različnih dejavnikov, kot so genetika, način poroda, dojenje, odstavitev, izpostavljenost okoljskim antigenom, zdravilom in prehrani. Nedavne študije so pokazale, da ima sestava črevesne mikrobiote, ki je bila vzpostavljena v zgodnjem obdobju življenja, pomembno vlogo pri razvoju in fiziologiji imunskega sistema gostitelja in vpliva na zdravje in razvoj bolezni v kasnejšem obdobju življenja. Namen. Predstaviti želimo delovanje in vpliv mikrobiote na razvoj in zdravje otroka v obdobju odraščanja in kasneje v odraslosti. Sklepne ugotovitve. Na homeostazo mikrobiote črevesja vplivajo številni dejavniki, ki lahko povzročijo tako imenovano stanje disbioze, ki vodi do zdravstvenih motenj ali bolezni, vključno z debelostjo, sladkorno boleznijo in alergijami. Zaradi tesne povezave črevesne mikrobiote z zdravjem posameznika je v porastu zanimanje za probiotike s ciljem preprečevanja in zdravljenja različnih bolezni. Probiotična hrana in/ali probiotična dopolnila bi lahko tako ugodno vplivala na zgodnje faze telesnega in duševnega razvoja otrok.

**Ključne besede:** črevesna mikrobiota, otroci, zdravje, probiotiki

## **The influence of gut microbiota and probiotics on children health**

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Gut microbiota is a complex ecosystem of more than  $10^{14}$  microorganisms in a symbiotic relationship with the host and has an important protective, structural and metabolic role. The intestinal mucosa is colonized immediately after birth by microorganisms originating mainly from mother's gut, vaginal tract and skin. The composition of gut microbiota is shaped during the early childhood by the age of three and it depends on different factors like genetics, mode of delivery, breastfeeding, weaning, exposure to environmental antigens, medication and diet. Recent studies have shown that the gut microbiota composition established during the early period of life plays an important role in the development and physiology of the host immune system and affects health and disease in later life. Purpose. We want to present the functioning and influence of the microbiota on the development and health of the child during the period of growing up and later in adulthood. Conclusions. The gut microbiota homeostasis is influenced by a wide range of factors that can cause a so-called state of dysbiosis leading to health disorders or diseases, including obesity, diabetes and allergies. Due to a close relationship between gut microbiota, health, and disease there is an increased interest in probiotics with the aim of different disease prevention and treatment. The use of probiotic food or/and daily probiotic supplements could therefore favorably influence the early stages of children physical and mental development.

**Keywords:** gut microbiota, children, health, probiotics

## Uporaba probiotikov v predšolskem obdobju

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**Uvod:** Črevesna mikrobiota je kompleksna združba mikroorganizmov, ki naseljujejo črevo gostitelja in so z njim v komenzalnem odnosu. Na sestavo črevesne mikrobiote v prvih mesecih življenja vplivajo številni dejavniki, kot so način poroda, vrsta hranjenja, starost in zdravstveno stanje matere, dolžina hospitalizacije in uporaba antibiotikov pri materi ali otroku. Ravnovesje v sestavi črevesne mikrobiote, katero lahko uravnavamo tudi z uživanjem probiotikov, pomembno vpliva na zdravje posameznika.

**Metode:** Namen študije je bil preveriti pogostost uživanja probiotikov v predšolskem obdobju. Rezultate smo pridobili s pomočjo anonimnega anketnega vprašalnika, ki so ga izpolnili starši otrok starih do 6 let. Vprašanja so se nanašala na poznavanje probiotikov in njihovih učinkov na zdravje ter na pogostost in količino uživanja pri otrocih.

**Rezultati:** V anketnem vprašalniku sta sodelovala 102 starša. Probiotike v prehrano otrok vključuje 86,3 % staršev, otroci jih zaužijejo izključno z živili v 36,7 %, preko kombinacije živil in dopolnil v 28,4 % in izključno preko dopolnil v 12,8 %. Otroci kot vir probiotikov najpogosteje uživajo sir (81,4 %) in navadni jogurt (79,4 %), 1 do 2-krat tedensko. Najpogostejsa količina sira je 20 g (46,1 %) in 2 dl (43,1 %) jogurta.

**Razprava in zaključek:** Probiotike v obliki probiotičnih živil ali dopolnil otroci uživajo že v predšolskem obdobju, največ v obliki sira in navadnega jogurta. Starši ob tem poročajo tudi o ugodnem vplivu na zdravje otroka.

**Ključne besede:** probiotiki, črevesna mikrobiota, probiotiki v predšolskem obdobju

## **The use of probiotics in the preschool period**

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**Introduction:** Gut microbiota is a complex community of microorganisms that inhabit the host's intestine and are in a commensal partnership with it. In the first months of life the gut microbiota composition is influenced by many factors, such as mode of delivery, method of infant feeding, age and maternal health status, length of hospitalization and antibiotic use in the mother or child. The balance of the gut microbiota composition, which can be regulated by the consumption of probiotics, has a significant impact on the health of the individual.

**Methods:** The aim was to research the frequency of probiotics use in the preschool period. The results were obtained with an anonymous questionnaire filled by parents of children aged up to 6 years. The questions were related to knowledge of probiotics and their effects on health and the frequency and quantity of consumption.

**Results:** A total of 102 parents participated in the survey. In 86.3 % probiotics are included in child's diet of which 36.7 % through foods, 28.4 % through a combination of foods and supplements and 12.8 % through supplements. Main source of probiotics in child's diet is cheese (81.4 %) and plain yoghurt (79.4 %), consumed 1 to 2 times a week. The most common amount of cheese is 20 g (46.1 %) and 2 dl (43.1 %) of yogurt.

**Discussion and conclusion:** The probiotics are consumed through foods or supplements already in the preschool period. Moreover, the favorable impact on children health has also been reported.

**Keywords:** probiotics, gut microbiota, probiotics in the preschool period

## Kreativni pristop k spodbujanju razmišljanja mladostnikov o zdravi prehrani

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Interpretacijsko in funkcionalno razumevanje strokovnih terminov je zaradi splošnega zmanjšanja bralnih navad pri osnovnošolcih zelo omejeno in iz generacije v generacijo nazaduje. Izziv je bil povezati metode poučevanja slovenskega jezika načrtovane v 6., 7., in 8. razredu s temami zdrave prehrane in s tem spodbuditi razmišljanje pri učencih o prehranjevalnih navadah in zdravem življenju. Skozi metodološki pristop je bilo potrebno povezati strokovno izrazoslovje tematike zdrave prehrane in hkrati spodbuditi učence k razmišljaju o zdravem načinu prehranjevanja. Učenci so sodelovali pri pripravi razlage zdrave prehrane, s primeri pri obveznih vsebinah poučevanja slovenskega jezika v obliki intervjuja, razlage in primerjave neumetnostnega besedila. Ozaveščanje je potekalo skozi referate in pri medpredmetnem povezovanju ter pisanju neu-metnostnih besedil - praktične priprave recepta popularnih jedi iz zdravih sezonskih sestavin lokalnega izvora in opisa postopka. Sledila je priprava jedi in degustacija na šolskem kuharskem tekmovanju. Izziv je bil osredotočiti se na enostavno pripravo in jo povezati s smernicami zdrave prehrane, ki jih določa NIJZ. Cilj je bil učencem približati tudi trajnostni pristop. Uspešnost se je preverjala z anketo o zdravi prehrani in analizo predlogov glede šolskih jedilnikov, zdrave prehrane in možnostjo zmanjševanja povzročanja odpadkov zaradi embalaže. Kriterij uspešnosti je zmožnost povezovanja zdravih prehranjevalnih navad in prezentacije hrane.

**Ključne besede:** kreativni pristop k poučevanju, razmišljanje o zdravju, zdrava hrana, zdrava prehrana

## **Creative approach to encourage the thinking of adolescent about healthy nutrition**

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Because of the decreasing reading habits of primary school students, the interpretative and functional understanding of the professional terms is more and more limited from generation to generation. The challenge was to connect the methods of teaching Slovenian language in the 6th, 7th and 8th class with the themes of healthy food and encourage them to think about the healthy nutrition and healthy way of life. Through a methodological approach we connected the vocabulary with professional terms of healthy nutrition and enhance the students to think about healthy food. The students cooperated in preparing the explanation for healthy food with examples from the theme within the obligatory program of Slovenian language teaching by using the methods of interview, explanation and comparison of literary texts. The awareness was raised through student's lectures and interdisciplinary connection, writing of recipe texts of popular food with healthy season ingredients of local origin. They students cooked the food and tried it at a school cooking competition. The challenge was simple cooking connected to the regulations of the National institute for public health. The goal was also to explain the students the sustainability. The success was measured by interviewing the students about healthy food and analyzing their suggestions for school meals and the reduction of packaging waist. The criteria were the ability to connect healthy nutrition and presentation of the food.

**Keywords:** Creative teaching approach, thinking about health, healthy food, healthy nutrition

## **Prehranjevalne navade in odnos osnovnošolcev do zdravega prehranjevanja**

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**Uvod:** Na prehranjevalne navade otrok in mladostnikov vplivajo številni dejavniki, med katerimi je pomemben tudi njihov odnos do zdravega prehranjevanja. Z raziskavo smo ugotavljali, kako se prehranjujejo osmošolci in kakšen je njihov odnos do zdravega prehranjevanja.

**Metode:** Za potrebe raziskave smo oblikovali spletno anketo, ki jo je izpolnilo 538 osmošolcev petih osnovnih šol, ki so sodelovale v projektu Uživajmo v zdravju in je bil sofinanciran s pomočjo Norveškega finančnega mehanizma.

**Rezultati:** Rezultati so pokazali, da imajo osmošolci zadovoljive prehranjevalne navade, ki so povezane z rednim uživanjem vsaj treh obrokov hrane dnevno, uživanjem zajtrka, sadja ter mleka in mlečnih izdelkov. Manj zadovoljivo je uživanje zelenjave in rib, uživanje sladkih in slanih prigrizkov, sladkih pijač in ocvrte hrane. Ugotovili smo, da učenci poznajo zdrava živila in jedi ter osnovna načela zdravega prehranjevanja. Kljub zadostnemu poznovanju zdrave hrane in prehranjevanja pa so pri prehranjevanju manj pozorni na to, da je hrana, ki jo uživajo zdrava. Razprava in zaključek: Domače in šolsko okolje lahko z ustrezno prehransko oskrbo in različnimi aktivnostmi pomembno prispeva k spodbujanju otrok k zdravemu načinu prehranjevanja. Priporočamo, da so aktivnosti usmerjene k oblikovanju pozitivnih stališč do zdravega prehranjevanja in zagotavljanju pestrosti ter dostopnosti senzorično privlačnih zdravih živil za otroke.

**Ključne besede:** prehrana, osnovnošolci, prehranjevalne navade, zdravo prehranjevanje

## **Pupils' eating habits and their attitudes towards healthy nutrition**

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**Introduction:** There are numerous factors influencing the eating habits of children and young people, among them their attitudes towards healthy eating habits. Our research aimed to establish the eating habits of eighth graders in elementary school and their attitudes towards healthy nutrition.

**Methods:** An on-line questionnaire was designed for the research; it was filled in by 538 eighth graders from five elementary schools that participated in the Enjoy in Health project, co-financed by the Norwegian financial mechanism.

**Results:** Results showed that respondents have satisfactory eating habits, in terms of regular consuming at least three meals daily, having breakfast, consuming fruit, milk and milk products. Less satisfactory is the consumption of vegetables and fish, sweet and salty snacks, soft drinks and fried food. It was established that pupils were familiar with healthy foodstuffs and dishes as well as the principles of healthy nutrition. In spite of their sufficient knowledge of healthy food and nutrition, in practice they are less careful to ensure that the food they consume is healthy.

**Discussion and conclusions:** The provision of appropriate food and various activities at home and school settings can significantly contribute to encouraging children for healthy nutrition. We recommend activities directed towards the formation of positive attitudes to healthy nutrition and the provision of variety and accessibility of healthy foodstuffs that are sensorily attractive to children.

**Keywords:** nutrition, pupils, eating habits, healthy nutrition

## Prehranski status osmošolcev v urbanem in ruralnem okolju Zgornje Gorenjske

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**Uvod:** Namen raziskave je bila analiza stanja celotne populacije osmošolcev treh občin Zgornje Gorenjske, Jesenice (urbano okolje), Kranjska Gora, Žirovnica (ruralni okolji) glede prehranskega statusa, subjektivnim mnenjem otrok o svoji telesni masi in uživanju nezdravih prehranskih izbir (sladkarije, sladke gazirane in negazirane pijače, slani prigrizki) ter primerjava glede na okolje bivanja.

**Metode:** Uporabljena je bila deskriptivna metoda. Merski instrument je bil anketni vprašalnik. Analize so bile izvedene s t-testom za dva neodvisna vzorca, ANOVA in testom hi-kvadrat. Rezultati: Realiziran delež od celotne populacije ( $N=262$ ) je bil 68,3 % ( $n = 179$ ). Statistično značilnih razlik v povprečju rezultatov indeksa telesne mase v območju prekomerne prehranjenosti ali debelosti in okoljem nismo dokazali. Prav tako ni statistično značilne povezave med mnenjem o telesni masi in okoljem bivanja ( $p = 0,912$ ), izkazale pa so se statistično značilne povezave v povprečjih odgovorov mnenja o zdravju in indeksom telesne mase ( $p = 0,000$ ). Statistično značilne razlike so se pokazale pri pitiju sladkih pijač: osmošolci iz urbanega okolja v povprečju popijejo več tako gaziranih kot negaziranih.

**Razprava in zaključek:** Raziskava predstavlja iztočnice za ciljano zdravstveno vzgojno delo medicinskih sester v lokalni skupnosti.

**Ključne besede:** debelost, otroci, medicinska sestra, zdravstvena vzgoja

## **Nutritional status in eight-grade students of Zgornja Gorenjska**

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Intoroduction: The aim of the study was to analyze population of eighth grade students in municipalities Jesenice (urban environment), Kranjska Gora and Žirovnica (rural environment): nutritional status, the subjective opinion about their weight and unhealthy nutritional habits (by using sweets, sweet carbonated in non-carbonated beverages, salty snacks) and to identify the differences based on the living environment. Methods : We conducted a cross- sectional study and used the descriptive method. The measuring instrument was a questionnaire. Analyses were conducted with t-test for two independent samples, ANOVA and Chi-squared test. Results: The response rate of the whole population ( $N = 262$ ) was 68.3 % ( $n = 179$ ). At 5 % level of risk there is no statistically significant association between body mass index in zone overweight or obese and the environment the children come from. There is also no statistically significant relationship between the opinion of body weight and the living environment ( $p = 0.912$ ), but there are some statistically significant relationship in average of body mass index and opinion of body weight. Significant differences were found in drinking sweet drinks:eighth grade students from the urban environment drank more sweet drinks. Discussion and conclusion: The research is source and opportunity for health education in local community.

**Keywords:** obesity, children, nurse, health education

## Učenje otrok o zdravi prehrani s pomočjo igralnih kart, družabnih iger in risb

Barbara Ozbič Kirijakopoulos

Otrok s preveliko telesno maso se mora naučiti pravilnega izbora ter količine živil. Upoštevati mora sicer enostavna pravila zdrave prehrane (jej 5 obrokov na dan, obroki so enakomerno razporejeni čez dan in vsebujejo veliko zelenjave, polnozrnatih živil, sladice uživamo le občasno, za žejo spijemo vodo). Vendar pa to, kar je morda enostavno razumeti odraslim, otrokom ni, saj imajo premalo znanja o človeškem telesu, prebavi in tehnologiji živil. Zato je potrebno pri učenju otrok uporabiti drugačne pristope. Otroku je potrebno glede na njegovo starost primerno razložiti delovanje telesa in načela zdrave prehrane – znanje pa utrditi. Pri delu z osnovnošolskimi otroci je otroku težko suhoperano tematiko prikazati na zanimiv način s ciljem, da si bo slišano tudi zapomnil. Iz tega razloga sem pri delu z otroci uporabila slikovni material, ki otroku na njemu primeren način prikaže najosnovnejša pravila zdrave prehrane. Z uporabo kart in družabnih iger smo v delavnici o zdravi prehrani z otroci na zanimiv način ponovili osvojeno znanje. Otroci so delavnico zapustili veseli, da so si zapomnili toliko novih stvari. Še več, svoje osvojeno znanje so s ponosom predali naprej njihovim staršem. Sklepne ugotovitve: Igralne karte sem predstavila tudi odraslim in navdušenje nad takšnim načinom osvajanja znanj o prehrani ni bilo nič manjše kot pri otrocih, zato bi bilo smiselno v prihodnosti takšne igre vključiti v delavnice o zdravi prehrani za otroke.

**Ključne besede:** otrok, debelost, igralne karte

## **Teaching children about nutrition with games, playing cards and drawings**

*Barbara Ozbič Kirijakopulos*

An overweight child must learn to choice the right food and the recommended amount of food. A child should follow the simple rules of a healthy diet (five meals per day, meals are evenly distributed throughout the day and contain many vegetables, whole grains, desserts are consumed only occasionally, we drink water for thirst). However, what may be easy to understand for adults is not easy for children because of their lack of knowledge about the human body, digestion, and food technology. Depending on child's age, it is necessary adequately explain the functioning of the body and the principle of a healthy diet. For this reason, when I worked with children, I used a picture material to show the child the most basic rules of healthy diet in a suitable way. With cards and board games in the workshop about healthy diet and lifestyle with children, pupils in an interesting way repeated the acquired knowledge. The children left the workshop happy because they remember so many new things. Moreover, they conveyed their acquired knowledge with pride to their parents. I also presented gaming cards to adults, and the enthusiasm for such a way of acquiring knowledge about nutrition was no less than in children. Findings: Playing cards and board games proved to be the best suitable device to re-educate children and adults in their knowledge, so it would be helpful in the future to include such games in workshops on healthy nutrition for children.

**Keywords:** child, obesity, playing cards

## Spletni portal »Šolski lonec« - Za zdravo ponudbo šolskih obrokov

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Spletni portal »Šolski lonec«, je namenjen strokovnjakom v vzgojno izobraževalnih zavodih (VIZ) pri implementaciji nacionalnih prehranskih smernic. Portal vsebuje strokovne vsebine o zdravi prehrani otrok in mladostnikov ter sodobno e- orodje, ki je namenjeno načrtovanju prehrane v VIZ. Projekt razvoja spletnega portala je finančno podprlo Ministrstvo za zdravje. Predstavitev vsebine: V okviru uresničevanja ciljev nacionalne prehranske politike je bila izvedena prenova nacionalnih prehranskih smernic v VIZ. V prispevku bomo predstavili e- orodje, ki je namenjeno osebju, odgovornemu za načrtovanje in pripravo šolskih obrokov. Orodje bo omogočalo vodenje šolske prehrane od nakupa živil do priprave obrokov. Omogočeno bo spremljanje dnevne prisotnosti otrok glede na tekoči šolski koledar, fizioloških potreb, vodenje evidenc živil, receptov in jedilnikov ter primerjava s smernicami. Orodje bo vključevalo priporočene normative glede velikosti porcij pri različnih starostnih skupinah otrok od 1 do 18 let. Sklepne ugotovitve: Pri razvoju spletnih orodij smo upoštevali na znanosti temelječe smernice in izkušnje strokovnjakov iz prakse. Pristop prikazuje primer povezovanja dobrih praks in obstoječih sistemov na tem področju v Sloveniji za skupni cilj – spodbujanje zdravega prehranjevanja otrok s posebnim poudarkom na načrtovanju in pripravi kakovostnih in ustrezno sestavljenih obrokov na nivoju posameznega VIZ.

**Ključne besede:** spletni portal, načrtovanje prehrane, sistem organizirane prehrane, šolski obroki, otroci

## **Web portal »Šolski lonec« - For Healthy School Meals Offer**

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To develop a comprehensive website named »Šolski lonec«, intended to educational institutions (EI) as a professional support according implementation of national nutritional guidelines (NNG). The website include contents on healthy diet of children and adolescents and a modern e-tool that allows meals planning in EI. The project co-founded through contribution of the Ministry of Health. Introduction: Within the framework of the Slovenian Food and Nutrition Action Plan experts were carried out revision of the NNG. The aim of the present paper is to present an e-tool intended to experts responsible for meal planning and preparing in EI. The e-tool will enable management of the school meals programme from the foods purchase to the meals serving. The e-tool will also allow monitoring of children daily presence in school according to the current school calendar as well as children and adolescents physiological needs, foods, recipes, school menus databases in relation to the NNG. An e-tool will include portion size recommendations for several aged groups of children from 1 to 18 years. Conclusions: During the development process of an e-tool of meals planning, we take into account evidence based NNG and existing experience from the practice. This approach illustrates a good example of existing systems integration for the common goal – to promote healthy eating among children by focusing on the planning and production of quality and adequate meals.

**Keywords:** website, meals planning, school meals programme, school meals, children

## Pogostost uživanja varovalnih živil pri srednješolcih

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**Uvod:** Namen prispevka je bil ovrednotiti prehranski status dijakov, preučiti njihove prehranske navade s poudarkom na pogostosti uživanja sadja, zelenjave, stročnic, rib in oreškov ter raziskati povezave med izbranimi spremenljivkami glede na spol, regijo bivanja in stanje hrانjenosti.

**Metode:** Kvantitativna raziskava je bila opravljena spomladisi 2019 na vzorcu dijakov 3. letnikov ( $n = 1563$ ) v Sloveniji. Njihova povprečna starost je 18 let. Uporabljen je bil anonimni anketni vprašalnik v spletnem orodju Ika, ki je vseboval 30 vprašanj.

**Rezultati:** Med tednom redno zajtrkuje 39,5 % srednješolcev. Sveže sadje vsakodnevno uživa 27,3 % srednješolcev, med njimi je več deklet (32,7 %). Svežo zelenjavo vsak dan uživa 31,5 % deklet in 19,8 % fantov. Primanjkljaj skupnega vnosa zelenjave (fantje: 151 g, dekleta: 160 g) in stročnic (fantje: 140 g, dekleta: 126 g) je večji, kot je pri vnosu sadja (fantje: 163 g, dekleta: 159 g). Enkrat tedensko ali pogosteje uživa ribe 27 % srednješolcev (28 % fantov in 26,6 % deklet), ta delež je največji v obalno-kraški in najmanjši v posavski statistični regiji. Povprečen ITM anketiranih je 22,35 kg/m<sup>2</sup>.

**Razprava in zaključek:** Uživanje varovalnih živil pri srednješolcih ni skladno s príporočili. Razmislieti velja predvsem o vključevanju vsebin zdravega prehranjevanja v srednješolsko izobraževanje ter okrepliti ukrepe prehranske politike v srednjih šolah.

**Ključne besede:** srednješolci, sadje in zelenjava, stročnice, ribe, ocena hrانjenosti

## **Protective foodstuff ingestion frequency of secondary school students**

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**Introduction:** The aim of the study was i) to evaluate the nutritional status and dietary habits of students, with special emphasis to the frequency of fruit, vegetable, legumes, fish and nuts ingestion, and ii) to research the relationship between selected variables according to gender, region of inhabitance and nutritional status using BMI.

**Methods:** Research was conducted in spring of 2019 among the third grade secondary school students in Slovenia ( $n = 1563$ ). In the research study, anonymous questionnaire of the Ika open source application was used (30 questions).

**Results:** During the weekdays, 39.5 % of students regularly eat breakfast. 27.3 % of the students consumes fresh fruit every day; the proportion is higher among girls (32.7 %). A higher proportion of girls consumes fresh vegetables every day compared to boys (31.5 % and 19.8 % respectively). A shortage of the overall vegetable (151 g boys, 160 g girls) and legumes (140 g b, 126 g g) intake is greater than that of fruit (163 g b, 159 g g). At least ones a week 27 % of students consumes fish (28 % b, 26.6 % g). This proportion is the highest in Obalno-kraška and the lowest in Posavska region. Average BMI of the students is 22.35 kg/m<sup>2</sup>.

**Discussion and conclusions:** The ingestion of protective foodstuff among students is not in accordance with recommendations. We should consider the inclusion of healthy nutrition contents into secondary school curriculum and to strengthen measures of nutrition policy in secondary schools.

**Keywords:** secondary school students, fruit and vegetables, legumes, fish, nutritional status

## Prehranska priporočila za mlade športnike

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**Uvod:** Optimalna prehranska strategija mladega športnika v obdobju odraščanja je izjemno pomembna, saj poleg optimizacije treninga in uspešne regeneracije omogoča rast, razvoj, preprečevanje poškodb in zaščito zdravja kratkoročno, kot tudi dolgoročno.

**Metode:** Pregled znanstvene literature s področja klinične športne prehrane o energijskih in hranilnih potrebah mladih športnikov.

**Rezultati in diskusija:** Prehranska priporočila za mlade športnike, ki so vključeni v visoko intenzivne športne programe, se razlikujejo od prehranskih priporočil za splošno populacijo. Kljub dejству, da imajo mladostniki specifične prehranske potrebe, saj se od odraslih razlikujejo v energijski porabi, porabi substratov in termoregulaciji med vadbo, so principi športne prehrane podobni kot za odrasle športnike. Zajemajo izračun energijskih potreb, ki zagotavljajo zadostno energijsko razpoložljivost, vnos ogljikovih hidratov v skladu s telesno maso, trajanjem, intenzivnostjo ter vrsto aktivnosti in višji vnos beljakovin, ki ga odrejamo na telesno maso, medtem ko za vnos prehranskih maščob veljajo splošna priporočila. Mikrohranila na katere moramo biti pozorni, saj pogosto primanjkujejo v prehrani, so: železo, kalcij in vitamin D.

**Zaključek:** Zaradi velikih obremenitev in povečanega tveganja za pomanjkanje hranil in energije, se priporoča individualna strokovna prehranska obravnavava, ki z optimizacijo prehrane vodi do boljšega zdravja in k boljšim športnim rezultatom.

**Ključne besede:** prehrana , mladi športnik, priporočila, zdravje, zmogljivost

## **Nutritional recommendations for young athletes**

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**Introduction:** The optimal nutrition strategy for young athletes is of the utmost importance, as it not only enables the optimization of the training process and successful recovery but also enables growth, development, prevention of injuries, short- and long- term health protection.

**Methods:** Scientific literature review from the field of the clinical sports nutrition focused on energy and nutrient requirements of young athletes.

**Results and discussion:** Nutritional recommendations for young athletes involved in high intensity sports activities differ from the ones for the general young population. Despite the fact that the nutritional requirements of young athletes, compared to adult athletes, are specific due to differences in energy and substrate consumption, as well as their thermoregulation mechanisms, the principles of sports nutrition for these two categories are quite similar. These principles include calculation of adequate energy availability, carbohydrate intake in accordance with body mass, duration, intensity and type of activity, as well as increased protein intake, based on body mass, whereas the fat intake is based on general recommendations. Micronutrients which should be in our focus due to their frequent deficiency are iron, calcium and vitamin D.

**Conclusions:** Due to the high training load and increased risk of nutrition deficits, regular individual nutrition counselling is considered highly recommended, as it can improve health and performance.

**Keywords:** nutrition, young athlete, recommendations, health, performance

## Vpliv prehranskega izobraževanja na spreminjanje prehranjevalnih navad mladostnikov

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**Uvod:** Prehranjevalne navade otrok in mladostnikov niso ustrezne. Namen raziskave je bil preučiti, ali prehransko izobraževanje, ki vključuje tudi starše in veščine priprave zdravih obrokov, vpliva na spreminjanje prehranjevalnih navad otrok in mladostnikov.

**Metode:** V raziskavo je bilo vključenih šestnajst otrok in mladostnikov s prekomerno telesno maso, ki se so se udeležili programa združenja debelosti in prekomerne telesne mase v okviru tabora »Moj izviv« Raziskava je potekala od februarja 2018 do septembra 2018.

Podatki so bili zbrani z anketnim vprašalnikom o prehranjevalnih navadah, vprašalnikom o pogostosti uživanja posameznih živil in merjenjem antropometričnih parametrov.

**Rezultati:** Ugotovili smo, da so otroci in mladostniki po končanem prehranskem izobraževanju in po šestmesečnem spremembo prehranjevalnih navad. Povečali so pogostost uživanja hranično bogatih živil, izrazito pa so zmanjšali pogostost uživanja hranično revnih živil. Izsledki raziskave tudi kažejo, da se je pri dekletih in fantih zmanjšala telesna masa, ITM, obseg pasu, količnik pas/višina in percentili ITM.

**Razprava in zaključek:** Prehransko izobraževanje mora vključevati ukrepe na več področjih. Pomembno je, da otroci in mladostniki osvojijo teoretična prehranska znanja in veščine, ki jim omogočajo samostojno načrtovanje in pripravo zdravih obrokov ter veščine prenesejo na starše.

**Ključne besede:** prehranjevalne navade otrok in mladostnikov, prehransko izobraževanje, prehransko znanje

## **The impact of nutritional education on changing dietary habits adolescents**

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**Introduction:** The eating habits of children and adolescents fail to be appropriate. The purpose of the study was to examine whether nutritional education, which also includes the skills of preparing healthy meals, affects the changes in eating habits of children and adolescents.

**Methods:** Sixteen overweight children and adolescents who participated in the obesity and overweight treatment programme within the “My challenge” camp, were included in the study. The study was conducted from February 2018 to September 2018. The data were collected with a questionnaire on eating habits, a questionnaire on the frequency of individual food consumption and the measurement of anthropometric parameters.

**Results:** After completed nutrition education and 6-month monitoring, we have achieved a change in eating habits. The subjects increased the frequency of eating nutrient-rich foods. They significantly reduced the frequency of consumption of unadvised foods, which also reflected that girls and boys lost weight, ITM, waistline, quotient waist/high and percentile BMI.

**Discussion and conclusion:** Nutrition education should include measures in different areas. It is very important that children and young people acquire nutrition knowledge and food behaviours that enable them to plan and prepare healthy meals and transfer their knowledge to their parents.

**Keywords:** dietary habits of children and adolescents, nutrition education, nutrition knowledge

## Ocena prehrane pri slovenskih mladostnikih

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**Uvod:** Zanimalo nas je, ali pri mladostnikih obstaja tveganje za zdravje zaradi neustrezne prehrane in/ali uporabe prehranskih dopolnil (PD).

**Metode:** Pri srednješolcih, starih 14-16 let (N=342), smo v projektu ARTOS 2014 pridobili podatke o vnosu mikrohranil s hrano (24-urni priklic), prehranjevalnih navadah (frekvenčni vprašalnik) in uporabi PD. Podatke smo ovrednotili glede na nacionalna priporočila in priporočila optimizirane mešane prehrane (OMD).

**Rezultati:** Mladostniki s hrano ne zaužijejo dovolj večine vitaminov in mineralov glede na nacionalna priporočila, presegajo pa priporočen vnos za niacin in natrij; slednjega zaužijejo 2-3 krat več, kot je minimalna priporočena vrednost. Večina mladostnikov uživa premalo priporočenih skupin živil (le približno 1/3 priporočene vrednosti OMD za sadje, zelenjavno in ribe, 40% OMD mleka/mlečnih izdelkov ter 1/2 OMD žit/žitnih izdelkov), po drugi strani pa preveč mesa/mesnih izdelkov (kar 320% OMD) in sladkih/slanih prigrizkov (kar 453% OMD). Hkrati jih 69% posega po PD. Uporabniki PD najpogosteje uživajo vitamine, minerale in njihove kombinacije (45%), njihovi vnos s hrano in PD pa ne presegajo zgornjih še dovoljenih mej dnevnega vnosa.

**Zaključek:** Mladostniki srednješolci morajo bistveno izboljšati prehranjevalne navade, s katerimi bodo lahko zadostili potrebam po mikrohranilih. Kot kaže, je nujno mladostnike izobraziti o pomenu zdrave prehrane in morebitnih škodljivih posledicah (večinoma nepotrebne) uporabe PD.

**Ključne besede:** mladostniki, hrana, prehranska dopolnila, vitamini in minerali, prehranska priporočila

## Evaluation of nutrition among adolescents in Slovenia

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**Introduction:** We aimed to determine whether health risk due to inadequate diet and/or use of dietary supplements (DS) exists among adolescents.

**Methods:** Data on micronutrients intake (24-h recall), eating habits (frequency questionnaire), and DS use were collected within the ACDSi 2014 study among high-school adolescents aged 14–16 years (N=342). Data were evaluated according to the national recommendations and to Optimized Mixed Diet (OMD).

**Results:** Adolescents consume less vitamins and minerals with diet alone than recommended and exceed the recommendations for niacin and sodium; the intake of the latter exceeds the recommended minimum value for 2–3 times. The vast majority of adolescents do not consume enough of the recommended food groups (they eat only 1/3 OMD recommended amounts of fruit, vegetables and fish, 40 % OMD for milk/dairy products, and 1/2 OMD for cereals/cereal products). On the other hand, adolescents exceed the recommended intake of meat/meat products (320 % OMD) and sweet/savory snacks (453 % OMD). Concomitantly, 69 % of adolescents use DS. DS users most often use vitamins, minerals or combinations (45 %), yet their intake with food and DS does not exceed the daily upper tolerable level.

**Conclusions:** Adolescents must significantly improve nutritional habits to meet the intake requirements for all micronutrients. Adolescents need to get a better education about the importance of healthy nutrition and possible negative effects of (mostly unnecessary) DS use.

**Keywords:** adolescents, food, dietary supplements, vitamins and minerals, nutrition recommendation



**Sekcija/Section**

**IKT rešitve in storitve za zdravje otrok  
in mladostnikov**

**Information and communication technology  
(ICT) solutions and services for the health  
of children and youngsters**

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## **Vabljeno predavanje Invited lecture**

### **18 let spletne svetovalne prakse mladim v Sloveniji**

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**Uvod:** Spletna svetovalnica To sem jaz mladostnikom v Sloveniji od leta 2001 omogoča anonimen, preprost, učinkovit dostop do strokovnega nasveta ter podporo pri reševanju težav med odraščanjem. Svetovalnica na naslovu [www.tosemjaz.net](http://www.tosemjaz.net) deluje pod okriljem Nacionalnega inštituta za javno zdravje. V multidisciplinarno spletno svetovalno mrežo je vključenih 54 strokovnjakov – prostovoljcev (zdravnikov različnih specializacij, psihologov, socialnih pedagogov in drugih ekspertov). Spletna svetovalnica ima uredništvo, v katerem dnevno skrbijo za komunikacijo med mladostniki in svetovalci, kot tudi za konistentno kodiranje prejetih spletnih vprašanj. V 18-letnem obdobju (2001-2019) so strokovnjaki mladim odgovorili na več kot 43.000 anonimnih vprašanj.

**Metode:** Pričujoča študija predstavlja analizo vsebine 14.980 vprašanj, prejetih v obdobju 2012-2018.

**Rezultati:** Večino vprašanj (78 %) so zastavila dekleta, 58 % piscev vprašanj je starih od 14 do 17 let. Med vodilnimi so naslednje teme: telesno zdravje (31 %), medosebni odnosi in duševno zdravje (30 %), spolnost (24 %). V analiziranem obdobju je bilo približno 10 odstotkov vseh vprašanj razvrščenih med t.i. 'najtežja vprašanja' – ta se nanašajo zlasti na motnje hranjenja, samopoškodbeno vedenje in samomorilnost.

**Zaključek:** Spletna svetovalnica mladim zagotavlja dopolnilni vir pomoči v stiski. V izkustveni praksi se kažejo potrebe po razvoju standardov, smernic in izobraževalnih programov na področju spletne svetovanja. Potrebujemo tudi jasne uredniške protokole.

**Ključne besede:** mladostniki, spletno svetovanje, reševanje problemov, uredniški protokoli

## **18 years of youth web counselling practice in Slovenia**

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**Introduction:** This is Me is the largest youth web counselling service in Slovenia, since 2001, providing adolescents with anonymous, simple and efficient public access to expert advice and problem-solving assistance. Service at [www.tosemjaz.net](http://www.tosemjaz.net) runs under the framework of National Institute of Public Health. Multidisciplinary web counselling network includes 54 experts – volunteers (medical doctors of various specialties, psychologists, social pedagogues and other professionals). Editorial board is daily responsible for communication between adolescents and counsellors, as well as for the consistent coding of each question. More than 43,000 anonymous questions were posted in the 18 years period (2001-2019).

**Methods:** This study presents the content analysis of the 14,980 questions, posted in 2012-2018, and answered by the experts.

**Results:** The majority of questions (78 %) are posted by girls and 58 % of writers are aged 14 - 17 years. The following topics are the most frequent: physical health (31 %), interpersonal relations and mental health (30 %), sexuality (24 %). In this period 10 % of all analyzed questions were categorized as 'most difficult questions' - mainly related to eating disorders, self-harming behavior and suicidality.

**Discussion and conclusions:** Web counselling service provide an additional source of help for adolescents in distress. Experiential practice calls for the development of professional standards, guidelines and educational programmes in the field of e-counselling. Clear editorial protocols are needed.

**Keywords:** adolescents, web counselling service, problem-solving aid, editorial protocols

## **Uporaba informacijsko komunikacijskih tehnologij pri učencih petega razreda v osnovni šoli**

*Tina Demšar*

*Zdravstveni dom dr. Adolfa Drolca Maribor, Ulica talcev 9, 2000 Maribor, Slovenija*

**Uvod:** Kot izvajalci zdravstvene vzgoje otrok in mladostnikov se že nekaj let srečujemo z problemom prekomerne uporabe informacijsko komunikacijskih tehnologij pri otrocih in mladostnikih v osnovnih šolah. Od nekdaj nam je bila zanimiva ta problematika, zato smo izvedli anketo v štirih osnovnih šolah pri petošolcih, saj smo želeli dokazati da otroci prekomerno uporabljajo vse vrste tehnologije ter interneta.

**Metode:** Uporabili smo kvantitativni pristop k raziskovanju. Učenci so na strukturiran natisnjen vprašalnik sestavljen iz 22 vprašanj odgovorjali samostojno v času razrednih ur v mesecu decembru 2018 v osnovni šoli, ki jo obiskujejo. V raziskavi je sodelovalo 173 učencev petega razreda osnovne šole; 86 fantov in 87 deklet.

**Rezultati in diskusija:** Rezultati so pokazali, da uporabljajo IKT prekomerno. Očitna je razlika med spoloma; fantje jih uporabljajo zelo veliko, medtem ko dekleta bistveno manj. Smo v razponu informacijsko komunikacijske tehnologije, ki nam marsikje olajša življenje, ne zavedamo pa se da se lahko prekomerna uporaba le-te hitro spremeni v zasvojenost. Otroci pri uporabi potrebujejo omejitve, ki jih na žalost nimajo vsi. Prekomerna uporaba se kaže v neprimerenem obnašanju otrok, nasilju ko ni dostopa do IKT, premalo gibanja kar vodi v debelost ter ne razvijanje sposobnosti komunikacije.

**Ključne besede:** otroci in mladostniki, zasvojenost, informacijsko komunikacijske tehnologije

## **The use of information and communication technology at fifth graders of elementary school**

*Tina Demšar*

*Community Health Centre dr. Adolfa Drolca Maribor, Ulica talcev 9, 2000 Maribor, Slovenia*

**Introduction:** As health education providers for children and adolescents, we have been facing the problem of excessive use of information and communication technologies in children and adolescents in elementary schools for several years. We have always been interested in this issue, so we conducted a survey in four elementary schools with fifth graders, as we wanted to prove that children over-use all kinds of technology and the Internet.

**Methods:** We used a quantitative method of work. Fifth graders answered structured printed questionnaire consisting of 22 questions independently during the class hours in December 2018 in the elementary school they attended. 173 students from the fifth grade of elementary school participated in the survey; 86 boys and 87 girls.

**Results:** The results showed that they use ICT excessively, and that the results of boys are worse than girls, which we also expected from the experience.

**Discussion and conclusions:** We are in the range of ICT that makes life easier for many of us, but we are not aware that the overuse of it can quickly turn into addiction. Children need restrictions when they use it, which unfortunately do not all have. Excessive use is reflected in improper behaviour of children, violence when there is no access to information and communication technologies, lack of movement leading to obesity, and no development of communication skills

**Keywords:** children and adolescents, addiction, information and communication technology

## Zasvojenost z družbenimi omrežji med mladostniki

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**Uvod:** Mladi so odvisni od različnih kemičnih substanc kot so alkohol, tobak, mamila ali nekemičnih. Med slednje sodijo televizija, internet, igre na srečo, šport in tudi hrana. Uporaba interneta je nujno orodje pri delu v šoli in nekaj vsakdanjega, povzroča pa tudi umik v namišljen virtualen svet, izhod, kamor se mladi zatekajo in bežijo pred problemi.

**Metode:** Namen raziskave je bil, ugotoviti povezavo nasilja v otroštvu z zasvojenostjo v mladosti, kako pogosto študenti uporabljajo družbena omrežja, vpliv oziroma posledice uporabe družbenih omrežij na odnose v družini in uspešnost študija. V ta namen je bil pripravljen anketni vprašalnik zaprtega tipa. Raziskava je bila izvedena med 184 študenti Univerze v Novem mestu Fakultete za zdravstvene vede v marcu 2019.

**Rezultati:** Ugotovili smo, da 91 % študentov uporablja družbena omrežja, 79 % od teh je vsakodnevnih uporabnikov. Študenti menijo, da jih 18 % posledično prihaja v konflikte z družinskim članom. 15 % študentov potrjuje, da se je njihova učinkovitost oz. uspešnost v šoli znižala, medtem, ko 23 % študentov uporaba družbenih omrežij sprošča. Skrb zbujač podatek kaže, da je nasilje v otroštvu dejavnik tveganja za zasvojenost med mladostniki.

**Diskusija:** Potrebno je omejiti uporabo informacijsko komunikacije tehnologije med mladimi in nameniti več časa druženju s prijatelji v resničnem življenju oziroma v naravi.

**Ključne besede:** zasvojenost, nekemična zasvojenost, mladostniki, družbeno omrežje

## Addiction to Social Networks among Adolescents

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**Introduction:** Young people are addicted to various chemical substances, such as alcohol, tobacco, drugs, or non-chemical substances. The latter include television, internet, games of chance, sports, and food. The use of the Internet is an indispensable tool for school work and part of everyday life, but it also causes a retreat into an imaginary virtual world, where young people resort in order to run away from their problems.

**Methods:** The purpose of the research was to determine the connection between violence in childhood and addiction in adolescence, the frequency of using social networks among young people, and the impact or consequences of using social networks on family relationships and the success at school. The survey was conducted among 184 students of the University of Novo Mesto, at the Faculty of Health Sciences in March 2019.

**Results:** We have found that 91 % of students use social networks, and 79 % of them are daily users. Students believe that 18 % of them consequently come into conflicts with family members. 15 % of students confirm that the use of social networks reduced their effectiveness and success in school, while 23 % of students find it relaxing. This alarming information shows that violence in childhood is a risk factor for addiction among adolescents.

**Discussion:** It is necessary to limit the use of information and communication technologies among young people and spend more time socializing with friends in real life or in nature.

**Keywords:** addiction, non-chemical addiction, adolescents, social network

## Vključevanje didaktičnih sredstev v prehransko izobraževanje

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Za doseganje ciljev prehranskega izobraževanja se uporabljajo različne aktivne metode dela, ki vključujejo tudi didaktična sredstva, ki spodbujajo udeležence izobraževanja, da se aktivno vključujejo v izobraževalni proces. Pomembno je, da didaktična sredstva v procesu poučevanja in učenja spodbujajo aktivnosti učencev, njihove komunikacijske veščine in interakcijo med udeleženci izobraževanja. Primer didaktičnega sredstva z opisanimi lastnostmi so prehranske karte, ki so namenjene usvajaju znanja o hrnilni in energijski vrednosti živil ter jih je mogoče na različne načine vključevati v proces prehranskega opismenjevanja. V proces izobraževanja se pogosto vključuje tudi informacijsko-komunikacijska tehnologija (IKT), s pomočjo katere udeleženci izobraževanja usvajajo in utrjujejo novo znanje. V izobraževanju otrok in mladostnikov pomemben del IKT predstavlja računalniške didaktične igre. Računalniške igre, ki v simulaciji vsakdanjega življenja obravnavajo prehranske vsebine in prehransko vedenje igralcev, imajo pomembno motivacijsko vlogo za usvajanje in prenos znanja v različne življenske situacije ter oblikovanje želenega vedenja. Izbera in uporaba ustreznih didaktičnih sredstev v procesu prehranskega izobraževanja in opismenjevanja lahko pomembno vpliva na kakovost učnega procesa in tudi na motivacijo udeležencev, da usvojeno znanje prenašajo v vsakdanje življenje in izboljšajo prehransko pismenost.

**Ključne besede:** prehransko izobraževanje, prehranska pismenost, didaktična sredstva, prehranske karte, informacijsko-komunikacijska tehnologija

## **The inclusion of didactic tools in nutrition education**

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To meet nutrition education goals, various active work methods that include didactic tools are used to stimulate participants in education to get actively involved in the education process. In the teaching and learning process, it is important that didactic tools encourage pupils in their activities, their communication skills and interaction among participants in the education. An example of a didactic tool with the above-mentioned qualities are nutrition cards, intended to convey knowledge of nutritional and energy value of foodstuffs, and they are suitable in various ways to be included in the process of nutrition literacy. Information and communication technology (ICT) is often included in the education process in order to help participants to acquire and consolidate new knowledge. Computer-based educational games represent an important part of ICT in the education of children and young people. Computer games that simulate everyday life, at the same time dealing with nutrition contents and food-related behaviour of players, have an important motivational role in acquiring and transferring knowledge into various life situations, and in forming desired behaviours. In the process of nutrition education and literacy, the selection and use of appropriate didactic tools may significantly influence both the quality of learning process and the motivation of participants to transfer the acquired knowledge into everyday life and to improve their nutrition literacy.

**Keywords:** nutrition education, nutrition literacy, didactic tools, nutrition cards, information and communication technology

## Libra - Bluetooth žepna kuhinjska tehntica

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Na Odseku za računalniške sisteme, Institut Jožef Stefan, smo razvili žepno kuhinjsko tehntico Libra, ki je namenjena zdravim in bolnim ljudem za natančno oceno hraničnega vnosa zaužite hrane in pijač. Tehntica je enostavna in cenovno ugodna naprava, brezzično povezana z mobilno aplikacijo, ki omogoča beleženje zaužite hrane in pijač. Brezzična povezava poteka po standardnem protokolu Bluetooth. Uporabnik z aplikacijo beleži zaužito hrano in pijačo, katere masa je izmerjena s povezano tehntico. V okviru projekta "Ballerina", katerega izvajamo v sklopu večjega evropskega projekta "TETRAMAX" iz Obzorij 2020, nadgrajujemo tehntico s sodobno tehnologijo z nizko porabo energije (t.j. Bluetooth Low Energy). Hkrati razvijamo spletne storitve za povezljivost tehntice s poljubno mobilno aplikacijo. V sodelovanju z irskim partnerjem Nutritics bomo posodobljeno napravo povezali z mobilno aplikacijo »Libro«. Obstaja več skupin uporabnikov takšnega sistema. Na primer, bolniki s sladkorno boleznijo morajo poznati vsebnost ogljikovih hidratov (OH) v zaužiti hrani. Ocena vsebnosti OH v živilu ali obroku ni enostavna, saj je za to potrebna informacija tako o hranični sestavi zaužite hrane kot tudi njihova količina. Tehntica Libra in aplikacija Libro bosta močno poenostavili takšno oceno. V prispevku bomo predstavili tehntico in možne načine uporabe za različne skupine uporabnikov, predvsem za otroke in mladostnike ter njihove starše.

**Ključne besede:** žepna kuhinjska tehntica, Bluetooth, štetje ogljikovih hidratov, sladkorna bolezen

## **Libra: Bluetooth pocket kitchen scale**

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Computer Systems Department at the Jožef Stefan Institute developed a pocket-sized kitchen scale "Libra" designed for an accurate assessment of the nutritional intake of food and beverages. Libra is a simple, non-expensive device with a wireless connection to web services by mobile application that allows users to record the consumed food and beverages. The wireless connection is based on the standard Bluetooth protocol. The application allows the user to record the consumed food and beverage, which mass is measured with the linked scale.

**Introduction:** Within the "Ballerina" project, which we carry out in the framework of the Horizon 2020 project "TETRAMAX", we are upgrading the scale with the modern low-energy technology (Bluetooth Low Energy). In cooperation with our Irish partner Nutritics who are developing the Libro mobile application, the scale will be connected with specialized web services. There are several groups of potential users of such a system. For example, patients with diabetes need to know the carbohydrate (OH) content of food intake. The estimation of OH content in a food or meal is not easy, as it requires information about both the nutritional composition of food intake and their amount. Libra and Libro will greatly simplify this evaluation. In the paper, we will present the scale and possible ways of using it for different groups of users, with a special focus on children and adolescents and their parents.

**Keywords:** pocket kitchen scale, Bluetooth, carbohydrate counting, diabetes

## Izobraževanje o spolno prenosljivih boleznih z uporabo virtualne resničnosti

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Mladostniki se vse bolj zgodaj soočajo s spolnimi odnosi. Posledično lahko od-sotna in pomanjkljiva komunikacija privede do neželenih posledic. Preprečimo jih lahko s pravočasno in ustrezzo vzgojo o zdravem spolnem življenju. Če vsebine predstavimo na mladostniku zanimiv in s sodobno informacijsko komunikacijsko tehnologijo podprt način, lahko osvestimo mlade o nevarnosti, ki jih prinašajo nezaščiteni spolni odnosi. V ta namen smo razvili spletno učno gradivo, ki temelji na virtualni resničnosti. Aplikacija je produkt sodelovanja dveh šol: Srednje šole Zagorje in Srednje tehniške in poklicne šole Trbovlje. Dostopna je na spletu, dijaki jo uporabljajo tako na računalnikih kakor tudi na tablicah in pametnih telefonih. V aplikaciji smo v virtualni resničnosti predstavili spolno prenosljive okužbe na mikroskopskem nivoju, kar mladostnikom na inovativen način predstavi svet mikroorganizmov. Želeli smo ozavestiti problematiko in seznaniti najstnike o posledicah nezaščitenega spolnega odnosa, boleznih in o ustreznih zaščiti, ugotoviti, kako učinkovita je uporaba sodobnih informacijsko komunikacijskih tehnologij v primerjavi s klasičnim učenjem. Zato smo zasnovali nadgradnjo virtualnega učnega gradiva, ki ga lahko pregledujemo na različnih napravah, hkrati pa smo dodali tudi učne vsebine. Ugotovili smo, da se večina dijakov strinja, da je aplikacija v primerjavi s klasičnimi učnimi pripomočki bolj uporabna in ponuja več informacij na enem mestu.

**Ključne besede:** spolne bolezni, mikroorganizmi, informacijsko komunikacijska tehnologija, virtualna resničnost

## **Education of sexually transmitted diseases with virtual reality**

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Adolescents increasingly face sexual relations earlier in life. Consequently, lack of communication and insufficient communication can lead to unwanted consequences, which can be prevented with early and appropriate education of healthy sex life. Interesting presentations supported with modern information and communications technology should be prepared to make young people aware of consequences of unprotected sex. We have developed online study material, based on virtual reality. The application is a product of the cooperation between two schools: Secondary School Zagorje and Secondary Technical and Vocational School Trbovlje. It is accessible online and students can use it on computers, as well as on tablets and smartphones. In the application, sexually transmitted infections are presented at the microscopic level. That is an innovative way for adolescents. With the application, we wanted to raise awareness and to inform teenagers about the consequences of unprotected sexual intercourse, sexually transmitted diseases and appropriate protections as well as to find out the effectiveness of modern information and communications technology in comparison to traditional learning. Therefore, we have designed an upgrade to the virtual education material, which can be used on various devices. We have also added different learning topics. We found out that most students agree that the application is more useful than traditional learning tools and offers more information in one place.

**Keywords:** sexually transmitted diseases, microorganisms, information and communications technology, virtual reality

## Digitalne kompetence študentov zdravstvene nege in mladi digitalni domorodci

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Net generacija predstavlja za zdravstvene delavce izziv, da prilagodijo svoje delovanje novemu okolju in potrebam pacientov. Mladi so zaradi bivanja v virtualnem svetu izoblikovali drugačne vrednote, spremenjeni so njihovi medsebojni odnosi in način komunikacije ter življenjski slog. Imajo drugačne, tudi nepoznane zdravstvene težave. Namen mednarodnega projekta DigiNurse je razviti model za izobraževanje študentov za delo s pacienti, ki uporabljajo digitalne rešitve za podporo zdravja in dobrega počutja. V projekt so vključeni strokovnjaki zdravstvene nege in informatike iz Finske, Belgije, Portugalske in Slovenije. Koncept digitalnih kompetenc je razmeroma nov in se zaradi hitro razvijajoče digitalne tehnologije nenehno spreminja. Za paciente z različnimi boleznimi je pomembna dobra samooskrba ob ustrezni podpori zdravstvenih delavcev. Za digitalne domorodce in priseljence je pri tem smiselno uporabiti razpoložljivo digitalno tehnologijo. Za nudenje dobre strokovne podpore tem pacientom pri samooskrbi so pomembne ustrezne digitalne (zdravstvene) kompetence ter poznavanje in odnos strokovnjakov do digitalnih tehnologij. Zato je pomembno razvijati te kompetence tako pri študentih zdravstvene nege, kot pri zaposlenih v zdravstvu. Z oblikovanjem modela DigiNurse želimo prispevati k teoretičnim izhodiščem za uspešen dvig digitalnih zdravstvenih kompetenc med študenti zdravstvene nege, kar bo lahko prispevalo k uspešnejši in učinkovitejši zdravstveni obravnavi pacientov.

**Ključne besede:** medicinska sestra, digitalne zdravstvene kompetence, DigiNurse model, izobraževanje

## **Digital competences of nursing students and young digital natives**

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The Net Generation represents a challenge for healthcare professionals to adapt their work to the new environment and the needs of patients. Because of their stay in the virtual world, young people have formed different values, their mutual relations and way of communication and lifestyle changed. They have different, unknown health problems. The goal of the DigiNurse international project is to develop a model for student education to work with patients, who are using digital solutions to support health and well-being. The project includes health care and IT professionals from Finland, Belgium, Portugal and Slovenia. The concept of digital competences is relatively new and is constantly changing due to rapidly evolving digital technology. For patients with various illnesses, good self-care is important, with the appropriate support of health professionals. For digital natives and immigrants, it makes sense to use the available digital technology. In order to provide good professional support to these patients for self-care, relevant digital (health) competencies and the knowledge and attitude of professionals towards digital technologies are important. It is therefore important to develop these competencies in both nursing students and health care professionals. By designing the DigiNurse model, we want to contribute to the theoretical fundamentals for a successful increase in digital health competences among nursing students, which can contribute to a more effective healthcare treatment for patients.

**Keywords:** nurse, digital health competence, DigiNurse model, education

## Kaj je vidno na fotografiji hrane in pijač?

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**Uvod:** Prehranjevalne navade običajno spremljamo z vodenjem prehranskega dnevnika oziroma s sprotnim popisovanjem zaužite hrane in pijač. Danes so na voljo številne aplikacije za vodenje elektronskega prehranskega dnevnika, ki olajšajo popisovanje, vseeno pa zahtevajo precej discipline pri sprotnem tehtanju in beleženju zaužitih obrokov.

**Metode:** V prispevku bomo predstavili sodobno računalniško tehnologijo za samodejno razpoznavanje fotografij hrane in pijač. Tehnologija temelji na globoki nevronski mreži za razpoznavanje slik (angl. deep neural network) in predstavlja nadgradnjo obstoječih avtomatiziranih rešitev. Ocena prehranjevalnih navad zahteva poleg razpoznavanja fotografij hrane in pijač tudi preslikavo te informacije na bazo podatkov o sestavi živil. Takšno preslikavo lahko dosežemo na samodejni način z naravno obdelavo jezika.

**Rezultati:** Nevronska mreža smo naučili razpoznavanja slik na podatkih, pridobljenih v raziskavi na replikah živil (angl. fake food). Mreža je zaenkrat zmožna razpoznavati 55 različnih vrst hrane in pijač z visoko stopnjo zanesljivosti (92,18%). Stopnja natančnosti preslikave na bazo podatkov o sestavi živil je 93%.

**Razprava in zaključek:** Tehnologijo lahko vključimo v mobilno aplikacijo, s katero uporabnik zajema fotografije hrane ali pijač. Mreža se sproti uči iz novih fotografij uporabnikov, kar pomeni, da bo v prihodnosti še bolj natančna ter zmožna razpoznavanja večjega števila vrst hrane in pijač.

**Ključne besede:** razpoznavanje fotografij hrane, hranilna vrednost, replika živil

## **What is visible on the photography of food and beverages?**

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**Introduction:** Eating habits are usually monitored by keeping a food diary, i.e. by precisely recording the consumed food and drinks. Today, there is a number of applications for keeping an electronic food diary, which facilitate the tracking of eating habits, but they require a lot of discipline in weighing and recording consumed meals.

**Methods:** In the paper, we will present a state-of-the-art computer technology for automated recognition of food and beverages from photographs. The technology is based on a deep neural network for image recognition and represents an upgrade over existing automated solutions. Evaluation of eating habits requires, in addition to recognizing food and drink images, the mapping of this information to a food composition database. This can also be obtained in an automated way by using natural language processing.

**Results:** The neural network was trained to recognize images using data collected in a study on fake foods. The network is currently able to identify 55 different food classes with a high degree of accuracy (92.18 %). The degree of accuracy of the mapping to the food composition database is 93 %.

**Discussion and conclusions:** We can integrate this technology into a mobile app, with which a user captures photos of food or beverages. The network is constantly learning from new user photos, which means it will be even more accurate in the future and will be able to identify more classes of food and beverages.

**Keywords:** food image recognition, nutritional value, fake food

## Uporaba digitalnih medijev pri otrocih in njeni socialno-emocionalni in zdravstveni izidi

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**Uvod:** Izpostavljenost otrok, starih od 6 do 7 let, digitalnim medijem vseh oblik se povečuje. Poleg tega narašča zaskrbljenost o tem, kako uporaba digitalnih medijev vpliva na otroke in družine. Prispevek predstavlja predhodne ugotovitve študije, katere namen je bil raziskati povezavo med uporabo digitalnih naprav v domačem okolju med otroki in nekaterimi socialno-emocionalnimi in zdravstvenimi posledicami.

**Metode:** Zbiranje podatkov je potekalo z uporabo anketnega vprašalnika spomladi 2019 v treh osnovnih šolah v Osijeku, Hrvatska. Starši 95 otrok starih od 6 do 7 let (44 punc in 51 fantov) so izpolnjevali omenjeni vprašalnik in oddali informacije o uporabi digitalnih medijev svojih otrok v domačem okolju in o nekaterih socialno-emocionalnih in zdravstvenih izidih.

**Rezultati:** Preučili smo povezavo med pogostostjo uporabe različnih digitalnih medijev v domačem okolju in starševskimi ocenami otrokovega zdravja, splošne sreče, vzajemnih odnosov, stopnje frustracije, pozornosti in prosocialnega vedenja. Družinski socialno-ekonomski status in starševa zaznava digitalne tehnologije sta bili uporabljeni kot kontrolni spremenljivki.

**Diskusija:** Izpostavljenost otrok starih od 6 do 7 let digitalnim medijem vseh oblik lahko vpliva na socialno-emocionalne in zdravstvene posledice otrok. Naše ugotovitve kažejo, da preprečevanje pretirane uporabe digitalnih naprav lahko zmanjša verjetnost socialno-emocionalnih in zdravstvenih težav pri otrocih.

**Ključne besede:** digitalni medij, otroci, zdravje otrok

## **Digital media use in young children and its socio-emotional and health outcomes**

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**Introduction:** Exposure of young children aged 6-7 years to digital media of all forms is increasing. Furthermore, concerns about how the use of digital media affects children and families are also rising. In this research we report preliminary findings from a small scale study aiming to investigate the relationship of children's use of digital devices in home environment and some socio-emotional, as well as health outcomes.

**Methods:** A survey was conducted in spring 2019 among 95 parents of children aged 6 to 7 (44 girls and 51 boys) in three primary schools in Osijek, Croatia. They provided the information regarding their children's digital media use in home environment as well as some socio-emotional and health outcomes.

**Results:** We examined the relationship of frequency of use of different digital media in home environment and the purpose of its use during a typical working day or weekend, with parental estimates of children's health, general happiness, peer relations, level of frustration, attention, and prosocial behavior. Family's socio-economic status and parental perception of digital technology were used as a control variables.

**Discussion and conclusion:** Exposure of young children aged 6 to 7 years to digital media of all forms, might interfere with children's socio-emotional and health outcomes. Our findings suggest that preventing an excessive use of digital devices may reduce the likelihood of socio-emotional and health problems in children.

**Keywords:** digital media, young children, children's health

## Uporaba interneta kot prediktor spletnega ustrahovanja med dijaki

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**Uvod:** Dejavnosti, ki potekajo med mladimi na internetu, se neposredno odražajo v resničnem življenju in spletno ustrahovanje ima lahko tragične posledice za psihološko zdravje mladostnikov. Namen raziskave je bil preučiti tvegano spletno vedenje in varnostno ozaveščenost kot prediktorje spletnega ustrahovanja in kibernetiske viktimizacije med dijaki.

**Metode:** Udeleženci so bili dijaki ( $N = 355$ ) iz treh različnih srednjih šol. Podatki so bili zbrani z vprašalnikom za prepoznavanje vedenja in oceno znanja informacijske znanosti (UISAQ), ki preučuje tvegano vedenje na internetu in raven varnostne ozaveščenosti.

**Rezultati:** Vsi vidiki varnostne ozaveščenosti in dva od treh vidikov tveganega vedenja na spletu so pomembni prediktorji spletnega ustrahovanja in kibernetiske viktimizacije. Omenjeni prediktorji bolje pojasnijo spletno ustrahovanje (25,4 % celotne variance) kot kibernetско viktimizacijo (11,9 % celotne variance). Dijaki ki redkeje posojajo njihove uporabniške podatke, se redkeje vedejo tvegano na spletu, pogosteje izvajajo varnostne kopije podatkov in imajo trdna prepričanja o varnosti na spletu, so redko spletni ustrahovalci. Dijaki ki redkeje posojajo njihove uporabniške podatke, se redkeje vedejo tvegano na spletu, pogosteje izvajajo varnostne kopije podatkov in imajo trdna prepričanja o varnosti in komunikaciji na spletu, so redko kibernetiske žrtve.

**Diskusija:** Kombinacija manj tveganega spletnega vedenja in večja varnostna ozaveščenost povzročata manj spletnega ustrahovanja in manj kibernetiske viktimizacije med dijaki. Izobraževanje je potrebno za okrepitev varnostne ozaveščenosti in upadanje spletnega ustrahovanja.

**Ključne besede:** kibernetiska viktimizacija, spletno ustrahovanje, varnostna ozaveščenost, tvegano spletno vedenje, UISAQ

## **Internet usage among secondary school pupils as predictor of cyberbullying**

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**Introduction:** Actions among youth on the Internet reflects directly onto the real life and cyberbullying can have tragic consequences on the psychological health. The aim was to examine risky online behaviour and security awareness as predictors of cyberbullying and cyber-victimization among pupils.

**Methods:** Participants were secondary school pupils ( $N=355$ ) from three different high-schools. Data was collected using UIAQ (Users' Information Security Awareness Questionnaire) that examines risky behaviour on the Internet and level of security awareness.

**Results:** All aspects of security awareness and two of three aspects of online risky behavior were significant predictors of cyberbullying and cyber-victimization. Same predictors better explain cyberbullying (25.4 % of total variance) than cyber-victimization (11.9 % of total variance). Pupils that less often lend access data, less often behave risky on the Internet, but more often backup data and have stronger beliefs in security on the Internet are rarely cyberbullies. Pupils that less often lend access data, less often behave risky on the Internet, but more often backup data, have stronger beliefs in security and communication on the Internet are rarely cyber-victims.

**Discussion and conclusion:** Combination of less risky online behaviour and higher security awareness results in less cyberbullying and less cyber-victimization among pupils. Education is needed in order to raise security awareness and to reduce cyberbullying.

**Keywords:** cyber-victimization, cyberbullying, security awareness, online risky behaviour, UIAQ

## **Veš, kaj ješ?**

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Zakonodaja že nekaj let opredeljuje obvezno označevanje predpaketiranih živil tudi s hrnilno vrednostjo, a odzvi potrošnikov dokazujejo, da mnogi teh informacij ne uporabljajo, ker jih preprosto ne razumejo, nimajo časa ali pa jih niti ne opazijo. Na ZPS smo v okviru projekta Deklaracija=Informacija razvili mobilno aplikacijo VešKajJeš, ki bo tudi otrokom in mladostnikom pomagala do bolj zdravih izbir. Aplikacijo smo razvili skupaj z Inštitutom Jožef Stefan, ki je poskrbel za tehnični razvoj aplikacije in povezavo do baze z več kot 20.000 živil, zbrano na Inštitutu za nutricionistiko. Predstavitev in promocija aplikacije je potekala preko različnih organizacij, medijev in družbenih omrežij. Potrošniki podatke o sestavi živil pogosteje uporabljajo, če so prikazani v preprostejši in razumljivejši obliki. V ta namen je bil razvit sistem označevanja hrnilne vrednosti, ki ključne podatke označuje z barvami semaforja. V raziskavi leta 2016, smo ugotovili, da ob predstavitvi izdelka s pomočjo "semaforja" kar 94 % potrošnikov pravilno ovrednoti prehranski profil izdelkov, zato smo tak način označevanja uporabili tudi v aplikaciji. Aplikacija bo mladim v pomoč pri bolj zdravih vsakodnevnih izbirah in jih vodila k bolj ozaveščenem in uravnoteženem načinu prehranjevanja, saj bodo lahko z njeno pomočjo, le s skeniranjem črtne kode na izdelku, izbirali in primerjali živila na prodajnem mestu. Njena uporaba je preprosta, hitra, informacije pa podane na razumljiv način.

**Ključne besede:** mobilna aplikacija, zdrave izbire, deklaracija, prehranski semafor

## **Do you know what you eat?**

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Obligatory labeling of pre-packaged foods with nutritional value is defined by legislation for a several years already, but consumers' responses prove that many of this information is not used. Simply because they do not understand it, they do not have time or do not even notice it. ZPS, within the project Declaration = Information, has developed a mobile application VešKajJeš, which will help also children and adolescents to make healthier choices. The application was developed with Institut Jožef Stefan, which provided the technical development and a link to the database with over 20,000 foods, collected at Institute of Nutrition. Presentation and promotion took place through various organizations, media and social networks. Consumers use food composition data more often if they are presented in a simpler and more understandable form. Labeling system was developed that colours key nutrition data with traffic light colours. In a survey (2016), we found that when the product is presented with such labeling system, as many as 94% of consumers correctly evaluate the nutritional profile. Considering that, we decided to use traffic light system in our application. VešKajJeš application will help young people to healthier everyday choices. It may lead them to a more conscious and balanced way of eating, as they will be able to select and compare food at the point of sale by simply scanning the barcode. Its use is simple, fast, and the information is given in an understandable way.

**Keywords:** mobile application, healthy choices, declaration, dietary traffic light



**Sekcija/Section**  
**Otrok in mladostnik – okolje**  
**Child and adolescent - environment**

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## Vabljeno predavanje Invited lecture

### Razširjena obravnava otročnice in novorojenčka v patronažnem varstvu

Andreja Ljubič, Ana Žužek Barle

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**Uvod:** Temeljna aktivnost patronažnega zdravstvenega varstva je skrb za posameznika, družino in skupnost. S preventivnim obiskom nosečnice patronažna medicinska sestra vstopa prvič v družino. Obravnavo nadaljuje z obiski novorojenčka in dojenčka v prvem letu starosti ter spremeljanjem otročnice v poporodnem obdobju. Preventivne aktivnosti so namenjene podpori otročnice pri skrbi za novorojenčka ter spremeljanju razvoja novorojenčka preden obišče posvetovalnico. V prvem letu otrokove starosti patronažna medicinska sestra izvede preventivne obiske v družini z namenom spodbujanja in podpore v obdobju otrokovih razvojnih prelomnic. V zadnjih letih so s strani patronažnih medicinskih sester opaženi dejavniki tveganja, ki kažejo na večjo ranljivost omenjene populacije.

**Metode:** V Zdravstvenem domu Postojna smo pristopili k izvedbi nacionalnih projektnih aktivnosti, ki predvidevajo razširitev: I. števila obiskov pri novorojenčku kjer patronažna medicinska sestra zazna v družini elemente ranljivosti in II. vsebinsko opredelitev obiskov otročnice in dojenčka v prvem letu starosti. Projektne aktivnosti se izvajajo od junija 2018. V prispevku predstavljamo izvedbo aktivnosti ter zadovoljstvo družine ob izvedbi aktivnosti.

**Rezultati:** Od začetka izvajanja projektnih aktivnosti smo po predvidenih projektnih aktivnostih izvedli vse obiske novorojenčkov, dojenčkov in otročnic z prenovljeno zdravstveno vzgojno vsebino, od tega smo izvedli dodatne obiske pri 44,6% le-teh. Dodane vsebine so tudi ključne za doseganje ranljivih skupin in omogočanje dostopnosti do zdravstvenih storitev za vse.

**Razprava in zaključek:** Izkazalo se je, da so dodatne vsebine s strani uporabnikov dobro sprejete in da se je povečala pogostost obravnav pri ranljivih skupinah prebivalstva.

**Ključne besede:** zdravstvena vzgoja, preventiva, patronažno varstvo, neenakosti v zdravju

## **Extended treatment of newborn and family in community nursing**

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**Introduction:** The basic activity of community health nursing is the care for the individual, the family and the community. Community nurse first time enters in the family when she visits a pregnant woman. Treatment continues with visits of newborn and infant in the first year of life and monitoring puerperium in the postpartum period. Preventive activities are intended to support the puerperium in the care of newborn and monitoring the development of the newborn before visiting the paediatrician. In the first year of the child's age community nurse, perform preventive visits to families in order to promote and support them during the period of child development milestones. In recent years, risk factors have been identified by community nurses that indicate a higher vulnerability of this population.

**Methods:** In Health Centre Postojna we have approached to the implementation of national project activities that envisage the extension: I. the number of visits to a new-born child where a nurse detects family elements of vulnerability and II. substantive definition visits of puerperium and infant in the first year of life. Project activities are carried out since June 2018. The article presents the implementation of activities and the satisfaction of the family with the implementation of the activity.

**Results:** Since the beginning of the project, all visits to newborns, infants and puerperium have been carried out according to project activities. Additional visits were made at 44.6% of all visits. The added content is also key to achieving vulnerable groups and facilitating access to health services for all.

**Discussion and conclusion:** It has turned out that additional content by users is well received and that the frequency of treatments in vulnerable groups of the population has increased.

**Keywords:** health education, prevention, community nursing, inequalities in health

## Vpliv socialne izključenosti mater na življenja njihovih otrok

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**Uvod:** V sodobnem času ima otroke vse več žensk z intelektualno oviro, kar je povezano s sodobnimi družbenimi pogledi na to, kaj pomeni biti odrasla oseba z intelektualno oviro. Družine, v katerih ima mama intelektualno oviro in v katerih odraščajo otroci se soočajo z različnimi problemi, na katere je potrebno gledati kontekstualno.

**Metode:** Uporabljena je bila kvalitativna metodologija. Opravljeni so bili poglobljeni intervjui z 12 materami, ki imajo intelektualno oviro, in ki so vključene v slovenske varstveno delovne centre. Eno od raziskovalnih vprašanj je bilo ali drži, da materinstvo ni individualna, singularna aktivnost posamezne osebe.

**Rezultati:** Izследki kvalitativne raziskave kažejo na socialno izključenost družin, v katerih ima mama ali oba starša intelektualno oviro. Gre za pomanjkanje virov, kot so varen in primeren dom ter primerni finančni prejemki, problem dostopnosti zaradi pomanjkanja lastnega prevoza, izkazala se je potreba po prilagojenih storitvah in izredno šibka socialna pripadnost.

**Razprava in zaključki:** Veliko problemov, ki jih imajo matere z intelektualno oviro, izvira iz njihovih socialnih situacij in ne zgolj iz narave njihove ovire. Družine opravljajo svoje starševske naloge v gmotno težkih situacijah, brez ustreznih socialnih vezi in podpor v skupnostih, ki niso prilagojene na njihove potrebe. Vse to predstavlja stres in vpliva na kakovost življenja za vse družinske člane.

**Ključne besede:** socialna izključenost, matere, intelektualna ovira, pomanjkanje virov, socialna pripadnost

## **Impact of the social exclusion of mothers on the lives of their children**

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**Introduction:** More and more women with an intellectual disability have children, which relates to present social views of what it means to be an adult with an intellectual disability. Families in which a mother has an intellectual disability and in which children are growing up are faced with various problems that need to be viewed contextually.

**Methods:** qualitative methodology was used. 12 research interviews with mothers with intellectual disabilities, who are users of Slovenian institutions for people with intellectual disabilities, were conducted. One of the research questions was is it true that motherhood is not an individual, singular activity of an individual women.

**Results:** The results of qualitative research indicate the social exclusion of families in which a mother or both parents have an intellectual disability. There is a lack of resources, such as a safe and suitable home, and adequate financial incomes, the problem of accessibility due to lack of own transport, the need for adapted services and extremely weak social affiliation has emerged.

**Discussions and Conclusions:** Many of the problems that mothers with intellectual disabilities have, derive from their social situation, and not simply from the nature of their disabilities. Families perform their parental tasks in difficult situations, without proper social connections and support in communities that are not adapted to their needs. All this presents stress and affects all family members.

**Keywords:** social exclusion, mothers, intellectual disabilities, lack of resources, social affiliation

## **Vpliv okolja in predmetov v vrtcih na zdravo rast in razvoj otrok**

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Fizični prostor in izdelki, kot so igrače, pohištvo in drugi izdelki v vrtcih, močno vplivajo na psihofizični razvoj otrok. Dogodki in izkušnje pri uporabi izdelka in okolja v zgodnjem otroštvu močno vplivajo na oblikovanje odnosov in vedenja osebe v kasnejšem življenu. V predšolskem obdobju se dogajajo velike spremembe v družbenem povezovanju, govoru, spominu, razmišljanju, kot tudi pri mnogih drugih funkcijah. Danes se mnogi otroci igrajo v zaprtih prostorih, najbolj pa jih zaposlijo video in računalniške igre, gledajo televizijo, zato je vedno bolj pomembna uporaba senzoričnih igrač, iger in igranja na prostem. Na žalost je razpoložljivost teh proizvodov slaba, če pa obstajajo, ali so iz neekološkega materiala ali pa so precenjene. Prispevek analizira sedanji izgled prostora in razpoložljivost izdelkov v vrtcih na Hrvaškem in na Češkem.

**Ključne besede:** predšolsko okolje, zdravje otrok, igra, didaktični izdelki, igrače

## **Impact of the environment and objects in preschool institutions on the healthy growth and development of children**

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Physical space and products such as toys, furniture and other products in pre-school institutions have a great influence on children's psychophysical development. Events and experiences of using the product and environment during early childhood strongly influence the formation of attitudes and behaviors of a person in later life. In the pre-school period, great changes are taking place in social interaction, in speech, in memory, in thinking, as in all other functions. Today, many children are playing indoors, most occupied by video and computer games and watching television, so the importance of using sensory toys, games and playing in the open is becoming increasingly important. Unfortunately, the availability of these products is poor, and if it exists, or is of non-ecological material or overrated. The paper analyzes the present appearance of space and the availability of products in kindergartens in the Republic of Croatia and the Czech Republic.

**Keywords:** preschool environment, children's health, play, didactic products, toys

## **Koučing v zdravstveni vzgoji za zdrav življenjski slog med mladimi**

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**Uvod:** Kronične nenalezljive bolezni so povezane z dejavniki tveganja zdravega življenjskega sloga, ki najpogosteje vključujejo kajenje, uživanje alkohola, nezdravo prehranjevanje in telesno nedejavnost. Sočasna podvrženost več dejavnikom je pogosta med mladimi, kar veča možnosti za nastanek bolezni. Ugotoviti smo žeeli, ali je koučing v zdravstveni vzgoji uporaben za odpravo ali preprečevanje pojavnosti multiplih dejavnikov tveganja zdravega življenjskega sloga med mladimi.

**Metode:** Opravili smo sistematični pregled literature v podatkovnih bazah PubMed in PubMed Central®. V analizo smo vključili raziskave, ki so obravnavale koučing v zdravstveni vzgoji za odpravo ali preprečevanje vsaj dveh dejavnikov tveganja zdravega življenjskega sloga v zdravi populaciji mlajši od 35 let.

**Rezultati:** Izmed 777 zadetkov smo identificirali 9 izvirnih znanstvenih člankov ustrezajoč vključitvenim kriterijem. Izmed njih, jih je pet poročalo o uspešnosti koučinga glede na opazovane izide, ena raziskava je ugotovila uspešnost za del opazovanih izidov, ena je analizirala doslednost izvajanja aktivnosti po zaključku intervencije, dve pa sta poročali skromen doprinos pristopa. Zaznali smo tudi razširjeno rabo različnih informacijsko-komunikacijskih tehnologij.

**Razprava in zaključki:** Koučing v zdravstveni vzgoji ima potencial za odpravo in preprečevanje dejavnikov tveganja življenjskega sloga med mladimi. Vključevanje pristopa mora temeljiti na premišljeni zasnovi in neprekinjeni evalvaciji učinkovitosti.

**Ključne besede:** mobilno zdravje, e-zdravje, preprečevanje dejavnikov tveganja, motivacijski intervju

## **Health coaching for healthy lifestyle among young people**

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**Introduction:** Healthy lifestyle risk factors that most commonly include smoking, alcohol consumption, unhealthy eating habits and physical inactivity are closely associated with increased risk for noncommunicable diseases. Simultaneous exposure to multiple lifestyle risk factors furthermore increases the risk of disease. In our study we analysed usefulness of health coaching approach for prevention or elimination of multiple lifestyle risk factors among young people.

**Methods:** A systematic review of PubMed and PubMed Central® databases was conducted. Studies covering health coaching for prevention or elimination of at least two lifestyle risk factors among healthy individuals under the age of 35 were included.

**Results:** According to our inclusion criteria we identified 9 original research articles out of 777 reviewed records. Amongst the included studies, five reported positive results regarding all observed outcomes, one included study reported partially positive results regarding their observed outcomes, one included study reported on consistency of activities maintenance post intervention and two included studies reported poor outcome related contribution of the approach. We also observed frequent use of diverse informatic communication technologies.

**Discussion and conclusions:** Health coaching has a potential to prevent and eliminate multiple lifestyle risk factors among young people. Implementation of the approach must be based on cautious design and continuous evaluation of efficiency.

**Keywords:** mHealth, eHealth, risk factors prevention, motivational interview

## Pogostost in trajanje organiziranih gibalnih dejavnosti na prostem

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**Uvod:** Pogostost in trajanje organiziranih gibalnih dejavnosti na prostem (OGDP) se med vrtci razlikuje zaradi številnih vplivov. Namen te raziskave je ugotoviti, v kolikšni meri na razlike v pogostosti in trajanju OGDP vplivajo izbrani kazalniki okolja, podpore vrtca ter znanje in mnenje vzgojiteljev.

**Metode:** V vzorec smo zajeli 128 vzgojiteljev iz različnih krajev Slovenije. Namsko smo jih razdelili na dva dela, in sicer glede na pogoje za izvajanje OGDP (bližina ustreznih zunanjih površin). Vzorec spremenljivk predstavlja namsko pripravljen anketni vprašalnik (prirejen po Zajec, Videmšek, Štihec, Pišot in Šimunič, 2010), ki vsebuje 4 teoretično enakovredne neodvisne spremenljivke: okolje, podpora vodstva, znanje in mnenje vzgojitelja in dve odvisni spremenljivki: trajanje in pogostost izvajanja OGDP. Za merjenje vpliva neodvisnih spremenljivk na odvisno smo uporabili multiplo regresijsko analizo.

**Rezultati:** Analiza rezultatov je pokazala, da imajo znanje in podpora vodstva pomemben vpliv na trajanje OGDP, medtem, ko na pogostost vplivajo znanje in okolje vrtca. Z vsemi izbranimi neodvisnimi spremenljivkami pa smo pojasnili 37,8 % variance oz. 35,8 % njene popravljene vrednosti.

**Razprava in zaključek:** Sklano z ugotovitvami predlagamo, da vodstva vrtcev premislijo o možnosti večje podpore vzgojiteljem pri izvajanju OGDP ter jim omogočijo dodatna izobraževanja, na podlagi katerih, predvidevamo, da bodo vzgojitelji povečali pogostost in trajanje OGDP.

**Ključne besede:** okolje, predšolski otrok, gibanje, zdravje

## **The frequency and duration of organized outdoor activities**

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**Introduction:** The purpose of this research is to determine to what extent the differences in the frequency and duration of organized outdoor exercise activities (OGDP) are influenced by the selected indicators of the environment, the support of the kindergarten, and the knowledge and opinion of educators.

**Methods:** We included 128 educators from different parts of Slovenia, divided them into two groups, depending on the conditions for the performance of OGDP. The variables sample was a deliberately prepared questionnaire, which contain 4 theoretically equivalent independent variables: environment, leadership support, knowledge and the opinion of the educator and two dependent variables: the duration and frequency of the performance of OGDP. To measure the influence of independent variables, we used multiplicative regression analysis on a dependent basis.

**Results:** Knowledge and support of management significantly impact on the duration of OGDP, while the knowledge and environment of the kindergarten influence the frequency. With all the selected independent variables we explained 37.8% of the variance, or rather 35.8% of its revised value.

**Discussion and conclusions:** Based on the findings, we suggest that the management of the kindergartens will consider the possibility of greater support to educators in the performance of OGDP and provide them with additional training on the basis of which we assume that educators will increase the frequency and duration of OGDP.

**Keywords:** environment, preschool child, movement, health

## Taborništvo je šola za življenje

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Zastavlja se vprašanje, ali letni tabor, ki temelji na sobivanju z naravo in na socialni naravi učenja, ki aktivno spodbuja sodelovanje in sodelovalno učenje tako med vrstniki kot medgeneracijsko, pripelje do boljšega počutja, psihičnega in fizičnega. Lokalno društvo tabornikov povezuje starostne skupine od predšolskih otrok do upokojencev. Med letom je nekaj taborniških srečanj v naravi, vrhunec medgeneracijskega druženja pa je poletni tabor kot odprto učno okolje. Udeležence spodbuja k postavljanju osebnih ciljev, ki jih peljejo v raziskovanje, k novemu znanju in novim veščinam, kar osvetli naravo učenja s kognitivne, psihološke perspektive in s tem opozarja na neločljivo prepletenost kognicije in emocij ter na pomen socialnih interakcij pri delovanju možganov. Upoštevajo se taborna pravila, ni informacijsko komunikacijske tehnologije, ni sladkarij, so pa zdravi prehranjevalni obroki, ki jo mladostniki ob podpori kuharja pripravljajo sami. Pri avtentičnem učenju, ki je postavljeno v pristen, življenjski kontekst, otroci in mladostniki rešujejo resnične življenjske probleme, tako da povezujejo različna področja in razvijajo uporabno znanje z visoko transferno vrednostjo. Večina se počuti varno, čuti se strpnost in umirjenost. Na tak način tabor z razvojem in krepitevijo kompetenc mlade pripravlja na uspešna soočanja z izzivi življenja spreminjače se družbe in hkrati vpliva na oblikovanje navad vseživljenjskega učenja. Taborništvo je način življenja.

**Ključne besede:** naravno okolje, taborništvo, avtentično bivanje, medgeneracijsko sodelovanje, vseživljenjsko učenje

## **Scouts – school for life**

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Summer camp is based on co-existence with nature and the social component of learning which encourages co-operation and co-operative learning between peers and different generations. The question is – does it lead to better physical and psychological well-being? The local scouts connect different age groups – from preschool children to pensioners. There are several scouting sessions in nature throughout the year and the summer camp is the peak of intergenerational socializing as an open learning environment. Participants are encouraged to set personal goals leading to exploration, new knowledge and skills which shine a light on the nature of learning both from cognitive and psychological perspective, pointing out the indispensable significance of emotions in cognition and social interactions in brain function. Camp rules are abided by – no IT, no sweets, there are healthy meals which the youths prepare themselves with the help of a cook. Children and teens solve real-life problems through authentic learning in a real-life context, thus connecting different areas of life and developing useful skills with high transfer value. Most children feel safe; there is a feeling of calm and tolerance. The camp develops and strengthens competencies, preparing youths to successfully face life's challenges in an ever-changing society, influencing the creation of lifelong learning habits. Scouts are a way of life.

**Keywords:** natural environment, scouts, intergenerational co-operation, authentic living, lifelong learning

## Timska obravnava otroške debelosti na primarnem nivoju

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Zaradi nezdravega življenjskega sloga se v Sloveniji srečujemo z naraščajočim problemom kroničnih nenalezljivih bolezni v odrasli dobi. Razvoj teh bolezni ima svoje zametke že v obdobju otroštva, saj takrat otrok sprejema in se uči življenjskih vzorcev in navad. Obenem pa se soočamo tudi že s problemom visoke incidence prekomerno prehranjenih in debelih otrok. Obravnava teh otrok je v Sloveniji na terciarnem nivoju ter posameznih centrih sekundarnega nivoja. Zdravstveni dom Nova Gorica je v šol. letu 2018/19 pristopil k pilotnemu projektu »Družinska obravnava debelosti« v sklopu Nadgradnje preventivnega programa za otroke in mladostnike, ki ga vodi NIJZ. S timsko obravnavo (v sestavi pediatra, diplomirane medicinske sestre, kineziologa, psihologa in dietetika) na primarnem nivoju smo skušali vplivati na spremembe življenjskih navad cele družine. Ob spremajanju in kontrolnih pregledih otrok, oz. cele družine, smo ugotavljali tako spremjanje življenjskih navad, kot tudi ugodne tendre opravljenih antropometričnih meritev vseh vključenih družinskih članov, ne samo otrok. Cilj prispevka je prikazati pomen in učinkovitost timske obravnave družine s problemom prekomerne prehranjenosti otroka na primarnem nivoju.

**Ključne besede:** otroška debelost, družinska obravnava, timska obravnava, primarni nivo

## **Team treatment of childhood obesity at primary health care system level**

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In Slovenia we are facing a growing problem of chronic non-contagious diseases in adult population due to an unhealthy lifestyle. We can trace the roots of these diseases all the way into someone's childhood, as this is the period when a person adopts and learns life patterns and habits. At the same time, we're dealing with a high incidence of childhood obesity. In Slovenia these children are being treated at the tertiary level and in some centres at the secondary level. During the school year 2018/19 the Nova Gorica Healthcare Centre has been participating in the project »Family-based treatment of obesity« as a part of an upgrade of the Preventive Programme for Children and Adolescents, which is managed by National Institute of Public Health (NIJZ). With a team treatment (which involves a paediatrician, a university health care nurse, a kinesiologist, a psychologist and a dietitian) at the primary health care level, we have been trying to encourage a change of lifestyle habits of the whole family. During the monitoring check-ups we have observed changes of lifestyle habits and positive trends of anthropometric measurements of every participating family member, not only children. Our aim is to demonstrate the importance and the efficiency of a team treatment of families which are dealing with the issue of childhood obesity at the primary health care level.

**Keywords:** childhood obesity, family-based treatment, team treatment, primary health care system level

## Zdravstvena nega otroka z nefrotskim sindromom – prikaz primera

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V prispevku predstavljamo primer otroka, ki smo ga zaradi nefrotskega sindroma obravnavali na Pediatrični kliniki UKC Maribor. Opisujemo pomembno vlogo zdravstveno-vzgojnega dela medicinske sestre s poudarkom na zdravstveni negi otroka z nefrotskim sindromom ter odnosu z otrokovimi starši. Pri otrocih je nefrotski sindrom ena najpogostejših ledvičnih bolezni. Največkrat gre za idiopatsko (primarno) obliko nefrotskega sindroma, ki se klinično kaže z edemi, proteinurijo, hipoalbuminemijo in hiperlipidemijo. Nefrotski sindrom opredelimo kot vnetno okvaro žil v glomerulih ledvic, ki povzroča izgubo beljakovin. Pri diagnosticiranju sta izredno pomembna pravilno usmerjena anamneza in klinični pregled. Staršam se svetuje, da nenehno opazujejo otrokovo počutje in morebitno prisotnost edmov, pozorni morajo biti na vneseno in izločeno tekočino, na pridobivanje telesne teže. Otrokova prehrana naj bo zdrava, manj slana, izogibajo se naj stikom z nalezljivimi boleznimi, redno dajejo otroku zdravila. Otroku je potrebno omogočiti počitek. Medicinska sestra poskrbi, da govor s starši poteka v mirnem prostoru. Zavedati se mora, da so starši v skrbeh in da potrebujejo nekoga, ki jim bo stal ob strani. Upoštevati mora, da je neverbalna (telesna) govorica še bolj pomembna kot govorjenje. Za starše si mora vzeti dovolj časa in se z njimi v miru pogovoriti. Staršem posreduje le preverjene informacije in jim zagotovi občutek varnosti.

**Ključne besede:** zdravstvena nega, otrok, nefrotski sindrom, ledvica

## **Healthcare of children with nephrotic syndrome - case study**

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The article presents the case of a child patient with nephrotic syndrome treated at the Paediatric Clinic in Maribor, and the significance of the nurse's health education work with an emphasis on nursing care of the child with nephrotic syndrome and the relationship with his parents. Nephrotic syndrome is one of the most common kidney diseases in children. The most common form of nephrotic syndrome in childhood is idiopathic (primary) nephrotic syndrome. The clinical picture of nephrotic syndrome has signs such as oedema, proteinuria, hypoalbuminaemia and hyperlipidaemia. Nephrotic syndrome is an inflammatory defect in the blood vessels in the glomeruli of the kidneys, which causes the loss of protein from the body. In the diagnostic work-up for nephrotic syndrome, it is extremely important to correctly target the history and to perform a clinical examination. Parents are advised to constantly observe their child's condition and the possible presence of oedemas. They should be attentive of fluid input and output and weight gain of their child. The child's diet should be healthy with reduced saltiness, parents should also avoid contact with infectious diseases and give their child medication regularly. The child needs time to rest. The nurse makes sure that the conversation with parents takes place in a calm environment, and is aware of the fact that parents are worried and need someone to be on their side. It needs to be taken into account that non-verbal (body) language is even more important than talking. The nurse needs to take enough time to thoroughly talk to the parents, only provide verified information and offer them a sense of security.

**Keywords:** nursing care, children, nephrotic syndrome, kidneys

## **Gozd, kot odprt učni prostor – primer dobre prakse**

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Kvaliteta življenja in bivanja v naravi, je s tempom današnjega življenja mladih družin bistveno okrnjena. Vzgojiteljem in ostalim strokovnim delavcem je tako ponujena možnost, da s strokovnimi pristopi stopijo iz cone udobja svojih igralnic in premajhnih igrišč, ter najmlajšim omogočijo pristen stik z naravo – spodaj predstavljen primer dobre prakse. Najprej enoletno druženje z gozdom, je bilo sprva mišljeno kot popestritev letnega programa skupine, vendar je zaradi svoje širine preraslo v triletno življenje z in ob gozdu. Največ prostora, je bilo na začetku namenjenega naravi (raziskovanje z vsemi čutili v različnih letnih časih) in gibanju (plezanje, tek, skakanje, ...) dvema izmed področij nacionalnega Kurikuluma za vrtce. Sčasoma je bilo ugotovljeno, da so bila spontano vključena še vsa ostala (jezik, družba, matematika, umetnost) in, da se prav vsako dejavnost lahko izvaja zunaj. Rezultati triletnega »druženja« z gozdom, se pri otrocih odražajo v dobri meri gibalnih spretnosti, v obilici veselja do življenja, v tem, da otroci v življenje odnašajo dober potencial za spoštljiv odnos do narave in sočloveka. V naravi se sprostijo, zaživijo in umirijo. Pri sprva skeptičnih starših je ustvarjeno popolno zaupanje in podpora.

**Ključne besede:** kvaliteta življenja, gozd, situacijsko učenje, spoštljiv odnos, gibalne spretnosti

## **Forrest, as open learning space - an example of good practice**

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Quality of life and living in nature is severely curtailed with the pace of today's lives of young families. Teachers and other professionals are thus offered the opportunity to step out of the comfort zone of their classrooms and playgrounds and offer the youngest children genuine contact with nature – the example of good practice presented below. Firstly, a one-year gathering with the forest, was originally meant to enrich the annual program of the group, but due to its breadth it turned into a three-year life with the forest. The most space was initially devoted to nature (exploring with all the senses in different seasons) and moving (climbing, running, jumping, ...), the two of the areas of the national Curriculum for kindergartens. Over time, it was found that all the rest areas (language, society, mathematics, art) were spontaneously involved and that any activity could be performed outside. The results of the three-year "socializing" with the forest are reflected in children as a good measure of motor skills, in the abundance of joy to life, in the fact that children achieved a good potential for a respectful attitude towards nature and human beings. Children relax, live and calm down in nature. With initially skeptical parents, we have created complete trust and support.

**Keywords:** quality of life, forest, situational learning, respectful attitude, motor skills

## Okolje kot vzpodbuda razvoja otroka

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Gibanje je primarna potreba otroka. Je eno najpomembnejših področij v otrokovem razvoju. Največji poudarek gibanja pri otrocih je pomemben do petega leta starosti. Otrokova naravna potreba je potreba po gibanju, saj tako zaznava in odkriva svoje telo, preizkuša, kaj telo zmore, doživlja veselje in ponos ob razvijajočih se sposobnostih in spretnostih ter zaupanje vase. Gibanje daje otroku občutek ugodja, varnosti, veselja, torej dobrega počutja, medtem ko so pomembne gibalne dejavnosti v predšolskem obdobju tako za otrokov gibalni in funkcionalni razvoj, kot tudi vplivajo na otrokove spoznavne, socialne in čustvene sposobnosti. Namenski prispevki je identifikacija gibanja kot pomembnega dejavnika razvoja otroka. V današnjih časih so otroci predvsem usmerjeni v dejavnosti v zaprtih prostorih, v hitenju, v doseganju različnih materialnih dosežkov in v odvisnost od različnih elektronskih naprav. Igra v naravi mora biti za otroke najpomembnejši del otroštva. Tako so otroci motivirani in spodbujati se ugodje v gibanju ter razvija gibalno sposobnost. Pomembno je ohranjanje in krepitev zdravja z gibanjem v naravi z različnimi vrstami dejavnosti glede na letni čas (hoja, tek, plezanje ...).

**Ključne besede:** gibanje v naravi, ohranjanje zdravja, razvoj otrok

## **Environment as an impetus for the development of a child**

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Movement is the primary need of the child. It is one of the most important areas in a child's development. The greatest emphasis on movement in children is important until the age of five. The child's natural need is the need to move, as he is able to perceive and discover his body, test what the body is capable of, experience joy and pride with developing skills and confidence in yourself. The movement gives the child a sense of comfort, safety, joy, wellbeing, while important pre-school physical activity activities are important for the child's physical and functional development as well as affecting the child's cognitive, social and emotional abilities. The purpose of the paper is to identify movement as an important factor in the development of a child. Nowadays, children are mainly focused on indoor activities, in the rush, in achieving different material achievements and in dependence on various electronic devices. Playing in nature should be the most important part of childhood for children. In this way, children are motivated and the pleasure of movement is promoted and their physical ability is developed. It is important to maintain and promote health through movement in nature with different types of activities according to the season (walking, running, climbing, ...).

**Keywords:** movement in nature, maintaining health, child development

## **Zaščita psihosocialne dobrobiti in duševnega zdravja otrok v našem času**

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Lastnosti, ki tvorijo duševno zdravje in psihično odpornost so v našem času nad vse pomembne za dobrobit posameznika in skupnosti. Predstavljen bo celostni in sistemski pogled na soigro med genetsko ali drugače biološko pogojenimi značilnostmi odzivanja, vedenja, čustvovanja in mišljenja ter okoljskimi dejavniki, ki vplivajo na otrokov psihosocialni razvoj in duševno zdravje. Nadalje bo prikazano delovanje ogrožajočih in varovalnih vplivov na psihosocialno dobrobit na duševno zdravje. Izpostavljen bo pomen individualnih razlik med otroki v posledicah delovanja ogrožajočih vplivov okolja. Mnogi neugodni vplivi v življenjski stvarnosti otrok so nedostopni preventivnim intervencijam in je marsikdaj psihosocialna zaščita otroka možna predvsem z aktiviranjem pozitivnih varovalnih dejavnikov, ki delujejo kot protiutež ogrožajočim dejavnikom ter s krepitvijo psihične odpornosti otroka. V zaključku bo prikazala možnosti, ki jih imajo osebe v otrokovem življenjskem okolju, skupnosti, institucije in politike za krepitev psihične odpornosti in varovanje duševnega zdravja otrok. Spričo zahtevnosti našega časa glede intelektualnega delovanja in prilagajanja na nago lo se spreminjače življenjske okoliščine, sta varovanje in krepitev duševnega zdravja otrok ključnega pomena za individualno in skupnostno dobrobit.

**Ključne besede:** zdravje otrok, odzivanje, vedenje, čustvovanje, duševno zdravje

## **The protection of children's psychosocial wellbeing and mental health in present times**

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In present times the components of mental health and psychological resiliency are of great importance for the wellbeing of individuals and for the wellbeing of communities. The holistic and systemic view on the interplay between genetic and other biological factors and environmental factors co-determining the child's reactivity, emotional, behavioral and cognitive characteristics will be presented. The role of risk and protective factors and processes affecting the psychosocial wellbeing and mental health will be discussed. As many adverse factors affecting mental health in childhood can not be eliminated in many cases the main approach of mental health protection consists in the activation of protective factors which can counter pound the impact of adversities and increase the child's mental resiliency. At the end will be present the possibilities of families, institutions, communities and politics for mental health promotion and protection of children's mental health. In the view of the complexity of our time regarding intellectual work and adaptation to the rapidly changing living conditions, the protection and strengthening of the mental health of children is of key importance for individual and community well-being.

**Keywords:** child health, response, behavior, emotion, mental health

## Atravmatski pristop v zdravstveni negi v pediatriji

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V procesu prilagajanja otrok na bolnišnično okolje in zdravljenje je podpora družini ključnega pomena. Atravmatska obravnava otrok in mladostnikov je področje zdravstvene nege, ki v dani situaciji omogoča maksimalen razvoj tako otroka, kot družine. Bolečina in bolezen pomembno vplivata na otrokov razvoj. Načela atravmatske obravnave vključujejo: preprečevanje oziroma zmanjševanje ločevanja otroka od svojcev, promoviranje, vzpodbujanje in zagotavljanje možnosti kontrole v procesu zdravljenja in zdravstvene nege in preprečevanje telesnih poškodb in bolečine. V bolnišnicah je potrebno zagotoviti stalno prisotnost staršev, s katerimi se s pomočjo profesionalne komunikacije ter pogajanjem doseže dogovor o stopnji vključenosti v zdravstveno nego. Pri starših, ki jih zdravstveno osebje redno obvešča o zdravstvenem stanju in so vključeni v oskrbo, je manj stresa, njihovi otroci pa se lažje prilagajo bolnišničnemu okolju. Občutki pomanjkanja kontrole izhajajo fizičnih in psiholoških ovir, kar pa lahko preprečimo z individualnim načrtom zdravstvene nege. Otroku je potrebno omogočiti možnost kontrole glede na njegovo starost in stopnjo razvoja. K obravnavi bolečine pri otrocih je najboljši multidisciplinaren pristop. Ta vključuje tako farmakološke kot nefarmakološke tehnike. Nefarmakološke tehnike, kot so: dobro informiranje, kognitivno-vedenjske ter tehnike preusmerjanja pozornosti, opisujejo za najbolj učinkovite pri obvladovanju bolečine v pediatriji.

**Ključne besede:** otrok, bolnišnica, bolečina, atravmatska zdravstvena nega

## **Atraumatic approach in pediatric nursing**

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Supporting the family is crucial in the process of adapting children to the hospital environment and treatment. The atraumatic care of children and adolescents is a field of nursing, which in the given situation enables the maximum development of both the child and the family. Pain and illness significantly affect the child's development. Principles of atraumatic care are: preventing or reducing the separation of the child from parents, promoting, encouraging and ensuring the possibility of control in the process of treatment and nursing and preventing injuries and pain. In hospitals, it is necessary to ensure the constant presence of parents, with whom, through professional communication and negotiation, an agreement is reached on the level of participation in health care. Parents who are regularly informed by health professionals and are involved in care are less stressed and their children are more easily adapted to the hospital environment. Feelings of lack of control result in physical and psychological obstacles, which can be prevented by an individual health care plan. The child should be given the possibility of control according to his age and stage of development. Multidisciplinary approach is the best for treatment of pain in children. This includes pharmacological and non-pharmacological techniques, such as: good information, cognitive-behavioral and distraction techniques, and are described as the most effective in managing pain in pediatrics.

**Keywords:** child, hospital, pain, atraumatic nursing care

## **Za rotavirusno infekcijo pogosteje obolevajo otroci**

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Otrokova obdobja delimo glede na njegov psihofizični razvoj. Novorojenčki, dojenčki in malčki so občutljiva skupina otrok. Otroci so zelo zgodaj vključeni v institucionalno varstvo. Najpogosteje je to vrtec, ker sprejema otrok običajno pozitivne impulze iz okolja. Kjer se srečuje veliko otrok, obstaja možnost prenosa okužbe z rotavirusom. Povod za nastanek referata je bilo opazovanje dogajanja v velikih nakupovalnih centrih, kjer se sestajajo in sprehajajo mamicice z otroki. V raziskavi smo uporabili vprašalnik, s katerim smo anketirali 40 diplomiranih medicinskih sester in 26 mamic obolelih otrok. Opaziti je razliko med mnenji diplomiranih medicinskih sester in mnenji mamic glede mesta okužbe. Večjih odstopanj v mnenjih anketiranih ni opaziti. Rotavirus se prenaša neposredno s fekalno-oralno okužbo, posredno pa z različnimi viri okužbe. Kot smo izvedeli iz analize ankete, pogosteje za rotavirusno okužbo obolevajo otroci, katere vodijo svojci na sprehode v nakupovalne centre, kot tisti, ki so v vrtcih. Težave pri otroku se kažejo predvsem kot driska in njene posledice. Bolezen pri otroku pogosto poteka zelo resno, zato strokovnjaki priporočajo cepljenje in upoštevanje ukrepov za preprečevanje okužbe.

**Ključne besede:** otrok, rotavirus, infekcija, preventiva

## **For rotavirus, children are more likely to get infected**

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Children's periods are divided according to his psychophysical development. Newborns, infants and toddlers are a sensitive group of children. Children are very early included in institutional care. Most often, it is a kindergarten because it accepts the child usually positive impulses from the environment. Where many children are confronted, there is a possibility of infection with a rotavirus. The reason for the publication of the report was the observation of the events in large shopping centers, where mothers and children meet and wander. In the survey we used the questionnaire to interview 40 graduated nurses and 26 mothers of diseased children. It is possible to observe the difference between the opinions of graduated nurses and the opinions of mothers about the place of the infection. Other major deviations in the opinion of the respondents are not observed. Rotavirus is transmitted directly with a faecal-oral infection, and indirectly with various sources of infection. As we have learned from the survey, more often get rotavirus children who are led to shopping centers for a walk by relatives than those who are in kindergartens. Problems with the child are mainly seen as diarrhea and its consequences. Sickness in the child is often very serious, therefore experts recommend vaccination and compliance with measures to prevent infection.

**Keywords:** child, rotavirus, infection, prevention

## **Ustreznost šolskega pohištva**

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**Uvod:** Dijaki vsakodnevno veliko časa sedijo v učilnici in šolsko pohištvo ima ključno vlogo pri ohranjanju in spodbujanju pravilne drže med sedenjem. Namen raziskave je bil oceniti (ne)skladje med obstoječim šolskim pohištvom in antropometričnimi merami dijakov.

**Metode:** Izmerili smo šest mer pohištva (višina, globina in širina sedala, zgornji rob naslonjala, višina do spodnjega roba mize, višina mize) in sedem antropometričnih mer dijakov (višina podkolenske kotanje, debelina stegna, višina komolca in ramen v sedeči drži, višina spodnjega roba lopatic, širina bokov, razdalja med zadnjico in podkolensko kotanjem), da bi ocenili neskladje.

**Rezultati:** V raziskavi je sodelovalo 139 dijakov iz slovenske srednje šole, starih od 14 do 20 let. Izračuni so pokazali, da večina dijakov (98 %) nima zadostnega prostora za noge pod mizo. Širina in globina sedala ne ustrezata 40 % dijakov. Višina mize in sedala ne ustrezata tretjini izmerjenih dijakov. Pri mlajših dijakih je neskladje večje kot pri starejših.

**Razprava in zaključek:** Rezultati so pokazali, da je med šolskim pohištvom in antropometričnimi merami dijakov veliko neskladje, zato bi bilo treba šolsko pohištvo v slovenskih srednjih šolah optimizirati. Pridobljeni antropometrični podatki bi se lahko upoštevali pri ergonomskem oblikovanju šolskega pohištva. Za boljše razumevanje in oceno skladnosti pohištva z merami dijakov so zaželene nadaljnje študije, ki bi ocenjevale različne starostne skupine z večjim vzorcem merjencev.

**Ključne besede:** antropometrija, ergonomija, šolsko pohištvo, učenci

## **Suitability of classroom furniture**

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**Introduction:** Considering the amount of time students spend in the classroom predominantly in a sitting position, school furniture plays a key role in maintaining and promoting good posture. The aim of this study was to evaluate the mismatch between the existing classroom furniture and students' anthropometric measures.

**Methods:** To assess the mismatch, six furniture dimensions (seat height, seat depth, seat width, upper edge of backrest, sitting desk clearance, desk height) and seven anthropometric measures (popliteal height, thigh thickness, elbow height sitting, shoulder height sitting, subscapular height, hip width, buttock-popliteal length) were measured.

**Results:** A total of 139 students, aged 14 to 20 years, from Slovenian secondary school participated in the study. The highest mismatch was found for seat to desk clearance (98 %), followed by seat width (41 %), seat depth (39 %), seat height (32 %), and desk height (30 %). A higher mismatch was observed in younger students.

**Discussion and conclusions:** The results demonstrate a high mismatch between the furniture and students' anthropometry indicating that a redesign of school furniture in Slovenian high schools is needed. Our anthropometric data could be considered when ergonomically designing school furniture. Studies assessing multiple age groups with larger sample sizes are desired to better evaluate the student-furniture mismatch.

**Keywords:** anthropometry, ergonomics, furniture mismatch, school-children

## Javnozdravstveni ukrepi za obvladovanje onesnaženosti z legionelami v slovenskih bazenskih kopališčih

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**Uvod:** Bazenska kopališča so priljubljena za rekreativni šport, vendar so izpostavljena mikrobiološkemu onesnaženju. Najbolj pogosto mikrobiološko onesnaženje predstavlja fekalna bakterijska kontaminacija. Posebnega pomena je onesnaženje z bakterijo legionelo. Legionela je smrtonosna, če se pravočasno ne zdravi, izbruhi pa predstavljajo javnozdravstveni problem. Njena incidenca je v naraščanju. Namen članka je bil predstaviti javnozdravstvene ukrepe za obvladovanje legionele v slovenskih bazenskih kopališčih.

**Metode:** Članek je pregled literature o javnozdravstvenih ukrepih za obvladovanje onesnaženosti legionele v bazenskih kopališčih. Literaturo sem izbrala iz knjig in domačih in svetovno znanih javno zdravtvenih revij ter iz elektronsko objavljenih prispevkov (spletna stran Nacionalnega inštituta za javno zdravje (NIJZ), Svetovna zdravstvena organizacija (SZO), Medline, Pubmed, in drugih).

**Rezultati:** Prikazane so opredelitve tveganja in ukrepi za preprečevanje legioneloz in sicer: preventivni ukrepi, ki zmanjšajo možnost razrasta legionel, ukrepi ob ugotovitvi prisotnosti legionel v bazenskih kopališčih ter ukrepi, če se legionarska bolezen pojavi.

**Zaključki:** Preprečevanje in obladovanje legioneloz je interdisciplirno delo, ki vključuje načrtovanje ter redno izvajanje sanitarno – tehničnih in higieniskih postopkov, mikrobiološki nadzor ter pravočasno in usterzno ukrepanje ob ugotovitvi legionele ali legioneloze.

**Ključne besede:** legionela, bazenska kopališča, tveganja, preventivni ukrepi

## **Public health measures for managing pollution with legionella in Slovenian swimming pools**

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**Introduction:** Swimming pools are popular for recreational sports, but are exposed to microbiological contamination. The most frequent microbiological contamination are fecal bacteria. Especially are important pollution with Legionella. Legionella infection is lethal if the infected patients are not treated on time, and its outbreaks are a great public health problem. Its incidence is rising. The purpose of the article is to present public health measures for the control of Legionella in Slovenian swimming pools.

**Methods:** This article is a review of the literature on public health measures to control the pollution of Legionella in swimming pools. I have chosen literature from books, domestic, world famous public health journals, and electronically published articles (the website of the National Institute of Public Health (NIPH) and the World Health Organization (WHO), Medline, Pubmed, etc.).

**Results:** The risk definitions and measures for the prevention of legionellosis preventive measures that reduce the possibility of Legionella growth, measures to detect the presence of Legionella in swimming pools and measures if the disease occurs are shown.

**Conclusions:** Prevention and treatment of legionellosis is an interdisciplinary work involving the planned and regular implementation of sanitary-technical and hygienic procedures, microbiological control, and urgent action in the determination of legionella or legionellosis.

**Keywords:** legionella, swimming pools, risk assessment, preventive measures

## Zobozdravstvena vzgoja in preventiva pri predšolskih otrocih

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Otroštvo je obdobje, ko so otroci zelo odvisni od odraslih. Z odraščanjem se ta odvisnost zmanjšuje, vendar je v celotnem predšolskem obdobju še vedno velika. Z vidika vzgoje za zdravje je pomembno, da otroke že v predšolskem obdobju navajamo na skrb za ustno zdravje. Namen prispevka je predstaviti, na kakšen način izvajamo učne delavnice za otroke v predšolskem obdobju na zobozdravstveni vzgoji in preventivi ZD Velenje. Medicinske sestre v ZZ-VP se v vrtce vključujemo večkrat letno v razmiku najmanj enega meseca. Z otroki v vrtcih, se medicinska sestra pogovarja o zdravju zob. Pri prvi delavnici spoznavamo kje in zakaj imamo zobe, na nadaljnji pa se pogovarjam o menjalnem zobovju, zdravi prehrani in nevarnostih sladkih pijač, kakšna je razlika med zdravimi in bolnimi zobi, kako preprečimo zubo gnilobo, ter o pomenu rednih obiskov pri zobozdravniku. Na koncu sledi obisk čisto prave zobne ambulante. Na takšen način otrok ne razvije strahu pred zobozdravnikom, obisk pa je običajno za otroka prava dogodivščina, ki se je bo z veseljem spominjal. Medicinske sestre imamo ključno vlogo pri spodbujanju zdravja in preprečevanju bolezni predšolskih otrok v vrtcih. Skupaj s strokovnimi sodelavci bi morale spodbujati zdravstveno vzgojne ukrepe za sprejetje zdravih življenjskih navad v predšolskem obdobju. Pomembno je, da se ukrepe za promocijo zdravja predstavijo tudi staršem, ki bi spodbujali ustrezno ustno higieno tudi doma.

**Ključne besede:** predšolsko obdobje, medicinska sestra, ustno zdravje, preventiva

## **Dental prevention and promotion in preschool children**

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Childhood is a period when children are highly dependent on adults. With growing up, this addiction is declining, but it is still high throughout the pre-school period. From the point of view of education for health, it is important that children are already referred to oral health care during the pre-school period. The purpose of the paper is to present the way we conduct workshops for children in pre-school age on dental education and prevention of ZD Velenje. Nurses are included in the kindergartens several times a year. In kindergartens, the nurse talks about dental health. At the first workshop we will find out where and why we have teeth, while on the next we discuss about changing teeth, healthy eating habits and dangers of sweet drinks, what is the difference between healthy and painful teeth, how to prevent tooth decay, and the importance of regular visits to the dentist. In the end, a visit of real dental clinic is followed. In this way, the child does not develop fear of a dentist, but the visit is usually a real adventure for the child, who will be happy to remember. Nurses play a key role in promoting health and preventing the illness of pre-school children in kindergartens. Together with professional associates, they should promote health education measures for the adoption of healthy lifestyles in the pre-school age. It is important that health promotion measures are also presented to parents who would encourage adequate oral hygiene at home as well.

**Keywords:** pre-school period, nurse, oral health, prevention

## **Pozicioniranje otroka v pripomočkih za nošnjo ter hojo**

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**Uvod:** Na tržišču je veliko pripomočkov, ki so namenjeni nošnji otroka (kengerujčki) ter učenju hoje (hojce). Nosilke niso omejene na starost otrok, temveč na stabilnost otroka, ki se nosi v takem pripomočku ter uporabo pravilnega položaja za določeno razvojno fazo. Otroška hojca pa je pripomoček na kolesih, s katerimi se lahko majhni otroci, ki še ne hodijo, samostojno premikajo s svojimi nogami. Običajno se uporablja od trenutka, ko je otrok sposoben sedeti brez pomoči, do takrat, ko samostojno hodi.

**Metode:** Pregled pripomočkov na tržišču in izdelava primerjave v fiziološkem oz. patološkem položaju medenice s kolki.

**Rezultati:** Izpostavita se dva dejavnika, ki povzročata nepravilnost v položajih medenice in kolka, in sicer pripomočki so ustrezni, niso pa primerna navodila za uporabo le-teh, ter pripomočki onemogočajo dosego fiziološke drže.

**Razprava in zaključek:** Nepravilna uporaba pripomočkov ima lahko vpliv na razvoj gibanja ter posledično lahko s staranjem povzroča bolečinske sindrome. Zato je pomembna pravilna izbira pripomočka ter individualne prilagoditve, da otrok doseže optimalen razvoj. Dober pripomoček je tisti, ki otroku zagotovi, da je lahko aktiven, da mu omogoča uporabo rotacij v trupu ter imeti mora čvrsto podlago od katere se otrok lahko odrine.

**Ključne besede:** drža, hojca, kengerujček, otrok, razvoj

## **Positioning of the child in wearing and walking tools**

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**Introduction:** There are many tools on the market that are designed to carry a child (kangaroo) and learn to walk (walkers). Carriers are not limited to the age of children, but to the stability of a child carried in such equipment and to the use of the right position for a particular development phase. The children's walker is a tool on wheels, with which young children who are not walking yet can move independently with their feet. Usually they are used from the moment when the child is able to sit without help until the time when he can walk independently.

**Methods:** Review of the devices on the market and comparison of the physiological or pathological position of the pelvis and the hips.

**Results:** There are two factors that cause anomalies in the positions of the pelvis and the hips: the devices are appropriate, but the recommendations for their use are not proper, and the devices make it impossible to achieve a physiological posture.

**Discussion and conclusions:** Improper use of the device can have an impact on the development of movement and, consequently, it can cause pain syndromes with aging. Therefore, the correct choice of the device and individual adjustments is important for the child's right development. A good tool is the one that ensures that the child is able to be active, allow them to use rotations of the torso, and has a solid base the child can push off it.

**Keywords:** posture, walking tool, kangaroo, child, development

## **Zakaj zanemarjati vloge očetov? Slabi primeri v evropskem kontekstu**

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Družbena struktura se je v teku zadnjih desetletij bistveno spremenila v malodane vseh evropskih državah. V številnih državah pa se še ni ustrezno posodovalo pojmovanje vloge očetov v družinski sferi. Pomanjkanje praktičnih rešitev v korist očetov in institucionalne težave pri vrednotenju zglednih očetov je v breme samih otrok in takih mater, ki si želijo boljšo vključenost v delovno okolje. Omenjen problem je pogosto prisoten v Italiji, predvsem v trenutkih, ko pride do starševske ločitve in zahteve po skrbništvu otrok. Cilj prispevka je osvetliti potrebo po ustreznejših institucionalnih rešitvah, ki bi v praksi omogočile boljšo prepoznavnost ključne vloge očetov pri vzgoji in rasti otrok. Avtor izhaja iz ugotovitev na podlagi sicer redkih znanstvenih in strokovnih študij na to temo, hkrati pa na podlagi nekaterih konkretnih primerov, ki jih velja globlje preučiti. Ciljni bralci prispevka so tvorci družinskih in zdravstvenih politik, socialni delavci, sodniki s področja družinskega prava. Prispevek ugotavlja, da je pot do enakih možnosti in pravic očetov še dolga. Ustvarila se je paradosalna situacija, ko zahteva po boljši vključenosti žensk na delovnih mestih in na uglednih položajih ni ustrezno balansirana z večjo družbeno odgovornostjo očetov pri aktivni vzgoji otrok. V kolikor ne bo prišlo do ustreznih rešitev za premoščanje omenjene situacije, bodo breme le-tega še dalje nosili predvsem otroci.

**Ključne besede:** vloga očetov, razvoj otrok, družbene spremembe, primeri

## **Why (not to) ignore the role of fathers? Insights from the European context**

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In most European countries, the social structure has changed substantially during the last decades. In several countries, however, the role of fathers has not changed accordingly. The lack of appropriate solutions for fathers in several contexts and the difficulties to recognize the role of fathers at an institutional level is penalising both their children and those mothers that are looking for better opportunities and visibility in the job market. Such an issue is persistent in Italy, particularly when parents separate or ask formally for child custody. The aim of this contribution is to shed light on the need for enhancing an appropriate recognition of the role of fathers' involvement in the life and education of children. The author provides a literature review of the studies on this topic; on the other hand, relevant case studies are discussed. Insights contained in the present contribution should be of interest to policy makers in family and health policies, social workers and experts in family law. The contribution finds that equal opportunities for fathers are difficult to achieve in practice. We are experiencing a paradoxical situation: policies for a better recognition of women in different aspects of social life including work are not matched by appropriate solutions for a better involvement of fathers in family life. Should the lack of such solutions persist in the coming years, children would continue to be in a position of severe disadvantage.

**Keywords:** fathers' involvement, child development, social change, case studies

## Telesne karakteristike dvanajstletnih šolarjev iz Šentjerneja generacije 2018/19

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Uvod: V šolskem letu 1997/98 je bila na podlagi antropometričnih meritev ocenjena telesna razvitost šentjernejskih dvanajstletnikov. Primerjava med spoloma je pokazala razlike, ki so bile v večini parametrov v korist dekletom. Iz primerjave dvanajstletnikov med šolskima letoma 1997/98 in 1970/71 je bilo ugotovljeno, da v Šentjerneju sekularni trend obstaja (Strmole, 1999).

Namen tokratne raziskave je bil preučiti fizični razvoj dvanajstletnikov iz Šentjerneja v šolskem letu 2018/19.

Metode: V raziskavo so bili vključeni šolarji, ki so v šolskem letu 2018/19 dopolnili dvanajst let. Izmerjenih je bilo enajst antropometričnih mer. Uporabljena je bila presečna metoda pridobivanja podatkov. Rezultati so bili statistično obdelani, izvedena je bila primerjava med spoloma ter primerjava z rezultati iz šolskega leta 1997/98.

Rezultati: Ugotovljeno je bilo, da je večina povprečnih vrednosti izmerjenih parametrov višja pri dekletih. Primerjava z rezultati iz šolskega leta 1997/98 je pokazala, da so povprečne vrednosti vseh izmerjenih parametrov višje v šolskem letu 2018/19.

Razprava in zaključek: Razlike v izmerjenih rezultatih med spoloma niso presenetljive, kajti največji spolni dimorfizem se pojavi v pubertetnem obdobju, v katerega deklice v povprečju vstopajo bolj zgodaj kot fantje.

Razlike v rezultatih med šolskima letoma so posledica spremenjenega življenjskega sloga in na podlagi teh rezultatov se lahko z gotovostjo trdi, da to vodi v prekomerno telesno težo.

**Ključne besede:** telesne karakteristike, šolarji, dvanajstletniki

## **Physical characteristics of twelve year olds pupils from Šentjernej generation 2018/19**

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Introduction: In 1997/98, the physical development of Šentjernej's twelve-year-old pupils was assessed based on anthropometric measurements. The gender comparison revealed the differences that benefited girls in most parameters. It was established that a secular trend exists in Šentjernej when comparing twelve-year-old pupils between the years 1997/98 and 1970/71 (Strmole, 1999).

The purpose of this research was to examine the physical development of twelve-year-old pupils from Šentjernej in the year 2018/19.

Methods: Pupils who reached twelve years in 2018/19 were included in the research. Eleven anthropometric measures were measured. A cross-sectional method of acquiring data was used. The results were statistically processed, the comparison between genders and the comparison with the results from 1997/98 was performed.

Results: It was found out that most of the average values of the measured parameters were higher with girls. The comparison with the results from 1997/98 revealed that the average values of all measured parameters were higher in the year 2018/19.

Discussion and conclusion: The differences in the measured results between genders are not surprising, as the biggest sexual dimorphism occurs in puberty, in which girls enter on average earlier than boys do.

The differences in results during school years are the result of a changed lifestyle and based on these results, it can certainly be said that a changed lifestyle leads to being overweight.

**Keywords:** physical characteristics, pupils, twelve year olds

## Šolsko okolje in vključevanje otrok s posebnimi potrebami: Sodelovanje s starši

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**Uvod:** Ker je vključevanje otrok s posebnimi potrebami v redne šolske programe zahteven proces, je potrebno vzpostaviti dobro sodelovanje med različnimi strokovnjaki in otrokovo družino. Želeli smo proučiti, kakšen izkušnje imajo učitelji in delovni terapevti v Sloveniji s sodelovanjem s starši.

**Metode:** Kvalitativna raziskava je vključeval šest fokusnih skupin ( $n = 36$ ) in poglobljene individualne intervjuje z učitelji ( $n = 12$ ) ter individualne intervjuje z delovnimi terapevti ( $n = 9$ ), ki obravnavajo otroke s posebnimi potrebami v šolskem okolju. Intervjuji so bili analizirani po metodi kvalitativne vsebinske analize.

**Rezultati:** Iz analize intervjujev z učitelji je izšel paradigmatski model, ki je vseboval tudi kategorijo »sodelovanje učitelja s starši«. Izpostavljena je bila tako pozitivna kot tudi negativna stran interakcij s starši. Za sodelovanje so bili pomembni prenos informacij, doslednost in rutina. Aktivna vključenost staršev je pogosto podprla sodelovanje in inkluzijo. Veliko ukrepov je bilo sprejetih prav na pobudo staršev. Delovni terapevti so poročali, da so se pogosto vključili na željo staršev, ki so predstavljeni vstopna vrata in omogočili nekatere adaptacije okolja.

**Razprava in zaključek:** Najbolj učinkovito sodelovanje je bilo vzpostavljeno, ko so učitelji, starši in zunanji strokovnjaki delali kot tim, z roko v roki. Potrebno je poiskati načine za izboljšanje sodelovanja med starši otrok s posebnimi potrebami, šolo in ostalimi strokovnjaki.

**Ključne besede:** otroci s posebnimi potrebami, inkluzija, starši, učitelji, delovni terapevt

## **Inclusion of Children with Special Needs: Collaboration with Parents**

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**Introduction:** Inclusion of children with special needs into regular school programs is a complex process. Therefore, good collaboration needs to be established between different experts and the child's family. The aim of our study was to explore the experience of teachers and occupational therapists in Slovenia with collaboration with parents.

**Methods:** This was a qualitative study that included six focus groups ( $n = 36$ ) and in-depth interviews with teachers ( $n = 12$ ) as well as interviews with occupational therapists ( $n = 9$ ) who worked with children with special needs. The interviews were analyzed using qualitative content analysis.

**Results:** A paradigmatic model emerged from the analysis of the interviews with the teachers. It included the category "collaboration with parents". We identified both positive and negative aspects of interactions with parents. Important for the collaboration were information exchange, consistency, and routine. Active involvement from the parents often supported collaboration and inclusion. Occupational therapists reported that usually, they got involved because the parents wanted them to. Parents acted as "gatekeepers" and enabled the necessary adaptations of the environment.

**Discussion and Conclusions:** Collaboration was most efficient when teachers, external experts, and parents worked as a team. It is essential to find ways that could improve the collaboration between parents of children with special needs, the school, and other professionals.

**Keywords:** children with special needs, inclusion, parents, teachers, occupational therapists



**Sekcija/Section**  
**Gibalna (ne)aktivnost otrok in mladostnikov**  
**Physical (in)activity of children and youth**

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## Vabljeno predavanje Invited lecture

### **Vpliv telesne sestave otrok na njihovo učinkovitost v teku na 600 in 2400 metrov – problematika ocenjevanja dosežkov**

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**Uvod:** Pri pouku Šport tako v osnovni kot srednji šoli nekateri učitelji ocenjujejo naloge (npr. tek na 600 m), ki ne predstavljajo gibalnega znanja, temveč predvsem gibalne sposobnosti.

Namen raziskave je bil ugotoviti, kako mere telesne sestave in telesna višina vplivajo na rezultat v teku na 600m in 2400m pri otrocih v obdobju med 10 in 14 leti in s tem pokazati strokovno neutemeljenost ocenjevanja vzdržljivostnih nalog.

**Metode:** Vzorec preiskovancev je sestavljalo 28 otrok – 14 fantov in 14 deklet. Otroci so bili povprečno športno aktivni. Preiskovanci so opravili antropometrijske meritve in testni tek na 600m in 2400m. Za ugotavljanje vpliva morfoloških dimenzij na vzdržljivostno učinkovitost otrok je bila uporabljena regresijska analiza in večfaktorska analiza kovariance.

**Rezultati:** Ugotovili smo, da dimenzijske telesne sestave in telesna višina pojasnjujejo 76 % oziroma 77 % variance rezultata v teku na 2400 m oz. 600 m.

**Razprava in zaključek:** Ugotovili smo, da dimenzijske telesne sestave in telesna višina vplivajo na učinkovitost v teku na 600 m in 2400 m podobno, ne pa enako. V krajšem teknu dosegajo boljše rezultate višji otroci z več mišične mase, v daljšem teknu pa predvsem višji otroci z malo maščobne in mišične mase. Rezultati študije nedvoumno kažejo, da je ocenjevanje rezultatov vzdržljivostnega teka strokovno neutemeljeno in verjetno zmanjšuje motivacijo za te dejavnosti pri manj uspešnih.

**Ključne besede:** telesna sestava, tek na 600 m, tek na 2400 m, puberteta, antropometrija

## **Influence of body composition dimensions of children on their efficiency in 600 and 2400 meter run - problems of assessment of achievements**

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**Introduction:** At physical education classes, both in elementary and secondary schools, some teachers evaluate tasks (eg, running at 600 m), which do not represent movement knowledge, but above all motor skills.

The purpose of the study was to investigate the influence of body composition dimensions and body height on 600 and 2400 m result in children of age 10 to 14 years and thus demonstrate the professional validity of the assessment of endurance tasks.

**Methods:** The sample comprised 28 children – 14 boys and 14 girls. Children were moderately active. All children took anthropometric measures and performed 600 and 2400m run. We used regression analysis and multifactor analysis of covariance to investigate the influence of morphological dimensions on children's endurance ability.

**Results:** Results revealed that body composition dimensions and body height explain 76 % and 77 % of variance in 2400 m and 600 m run, respectively.

**Discussion and conclusions:** Body composition dimensions and body height has a similar, but not equal, influence on efficiency of 600 and 2400 m run. Higher children with more fat free mass achieve better results in shorter runs. In longer runs, however, higher children with lower fat and lower fat free mass achieve better result. The results of the study unambiguously indicate that the evaluation of the results of the endurance runs is didactically unfounded and probably reduces the motivation for these activities to less successful ones.

**Keywords:** body composition, 600m run, 2400m run, puberty, anthropometry

## OLOK Boardy – igriva senzomotorična vadba z dostopno pametno ravnotežno desko

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V vsakodnevni praksi z laiki in vrhunskimi športniki opažamo pomembnost senzomotorične vadbe in obenem zaznavamo pomanjkanje zanimanja za tovrstno vadbo. Trdimo, da je to mogoče popraviti s tem, da da vadbo naredimo bolj privlačno, zlasti za mlajšo populacijo, z uvajanjem konceptov »igrivosti« v proces vadbe. V prispevku predstavljamo razvoj OLOK Boardy - cenovno ugodne pametne ravnotežne deske za senzomotorično vadbo ali »trening ravnotežja«. Sestavljen je iz lesene konstrukcije iz dveh delov: plošče s senzorjem (inercialna merilna enota s 6 prostostnimi stopnjami in Bluetooth komunikacijo) in zamenljivi leseni del, ki se postavi pod ploščo (polovična krogla ali polovični valj za prilagoditev težavnosti). Podatki senzorja se uporabljajo za spremljanje napredka posameznika, hkrati pa omogoča »igrivo« izkušnjo treninga in tako spodbuja redno vadbo. Začetni koncept igrivosti je zamišljen kot delitev igre na nivoje z različnimi stopnjami težavnosti, medtem ko nadaljnji razvoj vključuje trening z zaprtimi očmi, možnost izzivanja na dvobojo med vrstniki v telovadnici ali preko socialnih omrežij, javne tabele vodilnih za telovadnice in tedenske izzive (npr. košarkarski prosti met, medtem ko stojis na deski). Trdimo, da je uporaba takšnega pristopa ob nizki ceni izdelka prava pot, ki bo prinesla vse prednosti senzomotorične vadbe širšemu občinstvu, začenši z mlajšo populacijo.

**Ključne besede:** igrivost, senzomotorična vadba

## **OLOK Boardy – gamified sensorimotor training with affordable smart balance board**

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In our daily practice with lay people as well as top athletes we see the importance of sensorimotor training and at the same time we notice the lack of adherence to this training. We argue that this can be corrected by making this training more appealing, especially to the younger population, by introducing gamification concepts in the training process. This paper presents the development of OLOK Boardy - an affordable gamified smart board for sensorimotor or “balance” training. It consists of a wooden structure with two pieces: a plate with a sensor (6DOF inertial measurement unit with Bluetooth communication) and an interchangeable wooden piece to be put under the plate (half-sphere or half cylinder to adjust difficulty). The data from the sensor is used to automatically monitor progress and allows gamification of the experience of training and thus promotes “adherence” of trainees to the training programme. The initial gamification concept consists of splitting the game in levels with increasing difficulty, while future developments include training with eyes closed, adding the possibility to challenge peers in a gym or via social networks, leaderboards for local gyms, and weekly challenges (e.g. score a free-throw while standing on the board on a basketball court). We argue that using this gamified approach with a low price for the item is the right path to bring all the benefits of sensorimotor training to a wide audience, starting with the younger population.

**Keywords:** gamification, sensorimotor training

## **Analiza gibalne učinkovitosti različno prehranjenih predšolskih otrok**

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**Uvod:** Gibalna učinkovitost (GU) je seštevek različnih gibalnih sposobnosti. Na GU vpliva tudi prehranjenost. Pokazatelj prehranjenosti je razmerje med obsegom pasu in telesno višino (WHtR). Namen raziskave je bil ugotoviti, ali se v obdobju enega leta pojavijo razlike v GU različno prehranjenih otrok.

**Metode:** 23 štiri do pet let starih otrok iz vrtca smo širikrat testirali v obdobju enega leta (maj 2016, september 2016, januar 2017, maj 2017). Otroci so bili razdeljeni v skupino normalno prehranjenih ( $OP/ATV \leq 0,50$ ;  $N = 15$ ) in v skupino prekomerno prehranjenih ( $OP/ATV \geq 0,51$ ;  $N = 8$ ). GU (Z) predstavlja standardizirani rezultat devetih motoričnih testov, ki domnevno pokrivajo celotni motorični status otrok.

**Rezultati:** Delež različno prehranjenih otrok se v času raziskave ni spremenil. T-test za neodvisne vzorce pokaže, da ta razlika med skupinama na nobenem testiranju ni statistično značilna ( $p > 0,05$ ). T-test za odvisne vzorce pokaže, da ta razlika v GU med prvim in zadnjim testiranjem v obeh skupinah otrok ni statistično značilna ( $p > 0,05$ ).

**Razprava in zaključek:** Za ugotavljanje morebitne razlike v GU med različno prehranjenimi otroci bi bilo potrebno raziskavo razširiti na večji vzorec.

**Ključne besede:** predšolski otrok, gibalna učinkovitost, prehranjenost

## **Analysis of the motor efficiency between overweight and non-overweight preschool children**

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**Introduction:** Motor efficiency (ME) is the sum of different motor abilities. ME is also influenced by fatness. An indicator of fatness is the waist-to-height ratio (WHtR). The purpose of the study was to determine if in the period of one year differences occur in ME.

**Methods:** 23 of four to five year old children were tested four times in one year (May 2016, September 2016, January 2017, May 2017). Children were divided into non-overweight group ( $WHTR \leq 0.50$ ; N = 15) and overweight group ( $WHTR \geq 0.51$ ; N = 8). ME (Z) is presenting a standardized result of 9 motor tests, which supposedly covers the hole motor status of children.

**Results:** Fatness of children did not change during the study period. T-test for independent samples shows that the difference between the two groups at any testing is not statistically significant ( $p > 0.05$ ). T-test for dependent samples shows that the ME difference during the first and last testing in both groups of children is not statistically significant ( $p > 0.05$ ).

**Discussion:** To determine possible ME differences among the differently fat children the research should be extended to a larger sample.

**Keywords:** preschool child, motor efficiency, fatness

## Primerjava med gibalno aktivnimi in neaktivnimi dekleti v gibalnih sposobnostih

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**Uvod:** V današnjem času so otroci vse manj gibalno aktivni, kar se kaže tudi v upadu gibalnih sposobnosti. Razlike med gibalno aktivnimi in neaktivnimi otroci so mnogotere in se poleg vpliva na dejavnike zdravja kažejo tudi v povezavi s športnim uspehom.

**Metode:** Namen raziskave je bil ugotoviti razlike med gibalno aktivnimi in neaktivnimi dekleti v mišični jakosti rok in gibljivosti spodnjih okončin ter trupa. Vzorec preiskovank je zajemal 30 deklet, starosti  $11,05 \pm 1,98$  let. Meritve so zajemale mišično jakost stiska pesti z ročnim dinamometrom ter gibljivost spodnjih okončin in trupa. Za ugotavljanje razlik med skupinama smo uporabili T-test neodvisnih spremenljivk in Mann-Whitneyev U test.

**Rezultati:** Test stiska pesti in nekateri testi gibljivosti niso pokazali statistično značilnih razlik ( $p > 0,05$ ) med gibalno aktivnimi in neaktivnimi dekleti. Medtem, ko so testi gibljivosti spodnjih okončin pokazali statistično značilne razlike med skupinama v: i) upogibu kolka pri iztegnjenem kolenu ( $p < 0,001$ ), ii) primiku kolka ( $p < 0,05$ ), iii) notranji rotaciji levega kolka ( $p < 0,05$ ) in iv) dorzalni flegziji gležnja pri iztegnjenem in pokrčenem kolenu ( $p < 0,001$ ).

**Razprava in zaključek:** Predvidevali smo, da bo skupina gibalno aktivnih deklet, doseгла statistično značilno boljše rezultate v stisku pesti kot posledici vsakodnevnih treningov; predvidevali smo tudi, da bodo zaradi vključenosti v vadbeni proces dosegle večje obsege gibljivosti v vseh smereh obravnavanih sklepov.

**Ključne besede:** dekleta, ročni dinamometer, goniometrija

## **Comparison between physically active and inactive girls in motor skills**

**Urška Čeklič**

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**Introduction:** Today, children are increasingly less active, which is also reflected in the decline in motor skills. Differences between physically active and inactive children are multiple and in addition to influencing the health determinants, they are also associated with sports success.

**Methods:** The purpose of the study is to determine the differences between physically active and inactive girls in the grip strength and the flexibility of the lower limbs and the trunk. The sample consisted of 30 girls, aged  $11.05 \pm 1.98$  years. The measurements included the isometric strength measured by hand-held dynamometer and the flexibility of the lower limbs and trunk. To determine differences between groups we used the T-test of independent variables and the Mann-Whitney U test.

**Results:** The results of hand-held dynamometer and some flexibility tests did not show statistically significant differences ( $p > 0.05$ ) between physically active and inactive girls. While some of the flexibility tests of the lower limbs showed statistically significant differences between the groups in: i) hip flexion with extended knee ( $p < 0.001$ ), ii) hip adduction ( $p < 0.05$ ), iii) hip internal rotation ( $p < 0.05$ ); and iv) ankle dorsiflexion with flexed knee ( $p < 0.001$ ).

**Discussion and conclusion:** We assumed that physically active group would achieve statistically significantly better results in handgrip as a result of everyday workouts. We also assumed that, in order to be involved in the training process, they would achieve greater levels of flexibility in all range of motions (ROMs).

**Keywords:** girls, hand-held dynamometry, goniometry

## Povezanost sedentarnosti in bolečine v spodnjem delu hrbta med otroci in mladostniki

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**Uvod:** Bolečina v spodnjem delu hrbta (BSH) se pogosto pojavlja med otroci in mladostniki. Predlagani so bili številni dejavniki tveganja, med drugim dolgotrajno sedenje. Namen naše študije je bil pregledati literaturo o povezanosti med časom sedenja/sedentarnosti ali specifičnim sedentarnim obnašanjem in BSH med otroci in mladostniki.

**Metode:** Pregledali smo literaturo iz elektronske baze PubMed (v aprilu 2019). Iskalni niz je vključeval naslednje ključne besede (in njihove sinonime): BSH, otroci ali mladostniki, sedenje ali sedentarnost in dejavnik tveganja.

**Rezultati:** Izmed 486 zadetkov smo identificirali 55 relevantnih študij (48 prečno-presečnih, 2 prospektivni in 5 prečno-presečnih in prospektivnih). Dokazi o povezanosti BSH s časom gledanja TV, uporabe računalnika, mobilnega telefona in s sedenjem med izobraževanjem so bili nasprotujoči. V prečno-presečnih študijah se kaže pozitivna povezanost s časom igranja digitalnih iger in celokupnim časom za zasloni, medtem ko povezava v prospektivnih študijsih ni bila pokazana. Našli smo omejene dokaze za odsotnost povezanosti z dnevnim časom sedentarnosti.

**Razprava in zaključek:** Naši izsledki kažejo, da je povezanost med časom sedenja/sedentarnosti in BSH med otroci in mladostniki slabo raziskana. Večina objavljenih študij je prečno-presečne narave s samo-poročanim časom preživetim za zasloni. Potrebne so študije z objektivno merjenim celokupnim časom sedenja/sedentarnosti.

**Ključne besede:** sedenje, bolečina v križu, epidemiologija, dejavnik tveganja

## **Association of sedentary time and low back pain in children and adolescents**

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**Introduction:** Low back pain (LBP) is common in children and adolescents. Several risk factors have been proposed, including prolonged sitting. The aim of this study was to review the literature on association between sitting/sedentary time or specific sedentary behaviour and LBP in children and adolescents.

**Methods:** A literature search was conducted using PubMed electronic database in April 2019. The following key words (and the synonyms) were searched: low back pain, child or adolescent, sitting or sedentary behaviour, and risk factor.

**Results:** Out of 486 items found, 55 relevant studies were identified (48 cross-sectional, 2 prospective and 5 cross-sectional and prospective). Evidence for the association between LBP and TV time, computer time, time using mobile phone and educational sitting time were conflicting. In cross-sectional studies, time spent playing digital games and total screen time (or combination of different screen technologies) showed positive association, while in prospective studies no association were found. Finally, limited evidence for no association between LBP and total daily sedentary time were found.

**Discussion and conclusion:** Our findings indicate that the association between sitting/sedentary time and LBP in children and adolescents is largely unknown. Most studies are cross-sectional with self-reported screen time. Studies including objective measure of total sitting/sedentary time are needed.

**Keywords:** sitting, lower back pain, epidemiology, risk factor

## **Gibalna aktivnost oseb z zmerno motnjo v duševnem razvoju - trim steza**

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Gibalna aktivnost ima pozitivne posledice na delovanje človeka s telesnega, psihološkega in socialnega vidika. Koristno je vsako gibanje telesa, ki povzroči porabo energije. Trim steza je idealna možnost za gibanje. Osebe z motnjami v duševnem razvoju se pre malo gibajo. Večina jih v obdobju mladostništva in v odraslem obdobju potrebuje za gibanje zunanjou motivacijo in spodbude. V okviru interesne dejavnosti pohodništvo sem se odločila, da bomo z učenci posebnega programa obiskovali trim stezo, ki je v bližini naše šole in mesta. Z njimi sem izpeljala intervjuje in prišla do zaključka, da jih pritegnejo naloge na trim stezi, da si želijo izboljšati čas, ki ga potrebujejo za prehoditi trim stezo in da si želijo druženja z vrstniki. Z obiski trim steze smo nadaljevali. Učenci so izpopolnili izvajanje nalog na postajah, izboljšali čas, ki so ga porabili za pot okrog trim steze in se med seboj spoprijateljili. Trim steza je z različno strmimi stezami in različnimi vadbenimi postajami navdušila sodelujoče. Vsak je lahko izvajal in opravil naloge po svojih najboljših močeh. Pozitivne izkušnje bi lahko prenesli tudi na druge skupine ljudi, da bi z gibanjem v naravi in v družbi drugih aktivno preživljali svoj prosti čas.

**Ključne besede:** gibanje, osebe z zmerno motnjo v duševnem razvoju, motorične sposobnosti, trim steza, narava

## **Physical activity of persons with moderate mental disability - trim trail**

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Physical activity has beneficial effects on human performance, so from the physical, psychological and social point of view. Any kind of body movement that causes energy expenditure is beneficial. Trim trail is an ideal option for movement. Persons with mental disabilities are not moving enough. Most of them need outside motivation and encouragement in the adolescent period, as well as in adulthood. Through the interest activity of hiking, I have decided to visit regularly the trim trail, located in the vicinity of our school and the town, with the pupils attending the special programme. I have conducted interviews with the pupils and concluded that they are attracted by the trim trail tasks, they want to improve the time they need to walk the trim trail, and they want to socialize with their peers. We have continued with the visits to the trim trail. The pupils have honed the task executions on exercise stations, improved the time they needed to complete the trim trail, and established friendship amongst them. Trim trail has, with its trails of differently steep slopes and various exercise stations, made all involved enthusiastic about it. Each of them could perform and complete the tasks according to their best endeavours. Positive experiences can be transferred also to other groups of people, so they would exercise in nature and in the company of others to actively spend their leisure time.

**Keywords:** movement, persons with moderate mental disabilities, motor abilities, trim tail, nature

## Gibalno aktivni v vrtcu Dobje

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Preko aktivnosti, ki so vključene kot prednostna naloga vrtca ali kot obogatitveni program, ne spodbujamo samo gibalnih aktivnosti otrok v našem vrtcu, temveč tudi ozaveščamo vse deležnike, ki so vključeni v predšolsko vzgojo o pomen le-teh na gibalne sposobnosti in posledično na zdravje. Prednostna naloga v letnem delovnem načrtu je »Področje dejavnosti gibanja in odgovorno ravnanje za zdravje«. Gibanje vpliva na otrokov celostni razvoj - psihični in fizični. Smo vrtec na podeželju in imamo možnost usvajanja naravnih oblik gibanja v naravnem okolju, kar je še posebej pomembno za otroke prvega starostnega obdobja. Otrokom od tretjega leta dalje ponujamo plavalne vsebine, plesne delavnice, pohodništvo, smučanje in rolanje. Smo vrtec pri šoli in sodelujemo z učitelji, ki s svojim strokovnim znanjem prispevajo k kvalitetnejši izvedbi programov. Dejavnosti izvajajo strokovnjaki na določenem področju (športni pedagog, zdravstveni delavci, ljudje z izkušnjami iz lokalnega okolja), s prisotnostjo strokovne delavke iz oddelka. Na podlagi omenjenih dejavnosti ponujamo otrokom možnost za odkrivanje in razvijanje gibalnih potencialov. Kvaliteta preživetega časa otrok v vrtcu se je povečala. Glede na naraščajoče število udeležencev pri posameznih aktivnostih opažamo, da se je okreplil pozitiven odnos do gibanja ter samozaupanje otrok v lastne motorične zmožnosti.

**Ključne besede:** obogatitveni program, otrokov celostni razvoj, spodbujanje gibalne aktivnosti

## **Physically active in Kindergarten Dobje**

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Through the enrichment activities, which are delivered as a priority in our kindergarten, all participants are becoming aware of the importance of physical activity at preschool level and consequently of the impact on the health status of the children involved. The annual work plan prioritises physical activity and taking responsibility for health. Physical activity influences the overall development of children – psychological and physical. Since we are situated in the countryside, natural forms of movement are carried out during spending time in a forest, meadow or on a hill for the youngest children. Within the enrichment activities for children from 3 to 6, swimming, dancing, hiking, skiing and roller-blading are offered. Since our kindergarten is combined with primary school, primary school teachers contribute to qualitative performance of the activities. Activities are performed by experts (sports pedagogue, healthcare workers, different local inhabitants) and kindergarten teachers. Encouragement of physical activity of children within the enrichment programme has resulted in development and discovery of motor skills' potentials. It has also influenced the quality of time, spent in kindergarten and furthermore, it has strengthened the positive attitude toward physical activity and resulted in self- confident children.

**Keywords:** enrichment programme, the overall development of children, encouragement of physical activities

## Antropometrične meritve pri športni vzgoji

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Predstavljena je raziskava, ki smo jo izvedli v sklopu športne vzgoje v šolskem letu 2018/2019.

Sodelovalo je 113 učencev, 58 deklet in 55 fantov. Učenci so v paru ali manjši skupini s pomočjo antropometra, kalipera, merilnega traku in prenosne tehtnice opravili meritve, ki so jih potrebovali za nadaljnje izračune. Merili so telesno višino – TV, telesno maso – TM, obseg sproščene leve nadlahti – C, kožno gubo nadlahti leve roke – KGT, kožno gubo pod levo lopatico – KGS in izračunali površino preseka leve nadlakti – PPN, površino mišičja preseka nadlakti – PMiN, površino maščevja preseka nadlahti – PMaN, maso maščevja – MMa, pusto telesno maso – PTM, indeks maščobnosti nadlahti – IMaN in indeks telesne mase – ITM. Statistično pomembne razlike so se pokazale med športno aktivnimi in neaktivnimi učenci pri izmerjeni vrednostih KGT, KGS ter pri izračunanih vrednostih PMaN, MMa in IMaN. Primerjali smo še športno aktivne in neaktivne po spolu. Izkazalo se je, da so športno neaktivni fantje v povprečju težji, manjši, imajo višjo izmerjeno vrednost kožnih gub od športno aktivnih fantov, vendar med njimi ni statistično pomembnih razlik. Tudi športno neaktivna dekleta v primerjavi s športno aktivnimi dekleti kažejo višjo vrednost kožne gube nadlahti in pod levo lopatico, vrednosti površine maščevja preseka nadlahti, maso maščevja, indeks maščobnosti nadlahti, vendar razlike med učenkami niso statistično pomembne.

**Ključne besede:** sestava telesa, učenci, antropometrija, indeks maščobnosti nadlahti, športno aktivni

## **Athropometrical measurements in Physical Education lessons**

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This paper presents a survey which was carried out during the Physical Education lessons in school year 2018/2019. There were 113 pupil participants included—58 girls and 55 boys. The pupils carried out the measurements needed for further calculations in pairs or smaller groups using an anthropometer, calipers, a measuring tape, and portable scales. The criteria were body height, body weight, left upper arm circumference, left upper arm skin fold - KGT and subscapular skin fold - KGS. After taking the measurements, the pupils calculated the upper arm area, upper arm muscle area, upper arm fat area - PMaN, fat mass - MMa, lean body mass, fat index of the left upper arm - IMaN, and the body mass index.

Statistically significant differences were found between physically active and inactive pupils in the measured values of KGT, KGS, and for the calculated values of PMaN, MMa and IMaN. Physically active and inactive pupils were also compared according to gender, but there are no statistically significant differences among them.

**Keywords:** body composition, pupils, anthropometry, fat index of the left upper arm, physically active

## Uvajanje minute za zdravo hrbtenico pri uri športa

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Bolečina v spodnjem delu hrbta in druge težave s hrbtenico so zelo pogost zdruštven problem razvitega sveta. Zaradi sodobnega načina življenja, splošnega upada gibalne aktivnosti ter značilnosti šolskega sistema, v katerem prevladuje sedenje, se bolečine v predelu hrbtenice vedno bolj pogosto pojavljajo tudi pri osnovnošolskih otrocih. Kot učiteljica imam možnost vplivanja na ozaveščenost za primerno in potrebno skrb za higieno hrbtenice, kar zajema tako ustrezne gibalne vzorce kot tudi preventivna in kompenzatorna gibanja. Privzgajanje omenjenih znanj in veščin prispeva k navadam in skrbi za zdravo hrbtenico tudi v kasnejših obdobjih. V aktivu učiteljev športa smo si postavili izviv, da otrokom predstavimo pomen zdrave hrbtenice in pomembnosti ustrezne skrbi zanjo. Učenci v 6. razredu so na začetku sklopa rešili vprašalnik o skrbi in higieni njihove hrbtenice. Nato smo jim predstavili tematiko, ustrezne gibalne vaje in pravilne vzorce gibanja. Želeli smo ugotoviti, ali razumejo pomembnost zdrave hrbtenice. Zadali smo si cilj načrtne vadbe za zdravo hrbtenico. V sklopu ur športa smo redno, vsaj 5 minut na uro, izvajali vaje. Vaje so sčasoma postale rutina, a hkrati so jih izvajali skrbno, predvsem pa pravilno, kar je bil tudi naš namen. Menimo, da je uvajanje minute za zdravje v pouk različnih predmetov izrednega pomena za zdravje otrok.

**Ključne besede:** higiena hrbtenice, gibalni vzorci, preventiva, korektivne vaje

## **A 1-minute workout for a healthy spine during physical education lessons**

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Lower back pain and other back-related health problems are a widespread problem of the modern world. They are common in young adults and progress with age. Modern way of life, not moving enough, sitting most of the time (at school as well) has an impact on children too. As a physical education teacher I have an opportunity to influence the students and raise their consciousness regarding appropriate and necessary back hygiene care. The children should take care of appropriate movement patterns and it is also my responsibility to give them the opportunity to develop them. Fundamental movement skills and habitual physical activity definitely has long-term health benefits. Physical education teachers at our school decided to promote and improve student health and wellbeing by teaching them the importance of back-care awareness and how to take care of it. First, the 6th-graders were given a questionnaire on the subject. We discussed the results and showed them the importance of regular physical activity and movement patterns. It was our goal to create a short workout plan for a healthy back and incorporate it into our curriculum. Thus, we included a 5-minute workout to reduce back pain into each PE lesson. This soon evolved into a productive routine where back exercises were done carefully and effectively. We believe that regular 1-minute physical activity regarding back health is really valuable and therefore we incorporated it into our PE classes.

**Keywords:** back hygiene, movement patterns, prevention, corrective exercises

## **Vzgoja za ustrezno pripravo na delo – medpredmetna povezava predmetov tehnike in športa za zdravje**

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Učni načrti osnovnošolskega izobraževanja spodbujajo medpredmetno povezovanje. Namen slednjega je doseči večjo stopnjo povezanosti med disciplinarnimi znanji, povečati kakovost, trajnost pridobljenega znanja in pripraviti učence na kakovostnejše življenje. Ena od pomembnih vsebin predmeta tehnika je tudi »varnost učencev pri delu«. V enem delu tega področja lahko prispevamo tudi z medpredmetnim povezovanjem s predmetom Šport za zdravje in učencem prikažemo pomen ustrezne priprave na delo, s ciljem učinkovitejšega dela kot tudi preprečevanja bolečin pri delu. Cilj aktivnosti je bil, da si učenci sami izdelajo sedežne garniture. Učence smo želeti seznaniti z vsemi koraki do izdelave izdelka, med drugim tudi z ustrezno pripravo, kamor sodi ogrevanje in izvajanje ustreznih gibalnih vzorcev pri dvigovanju težjih bremen in dolgotrajnih ohranjanj prisilnih telesnih položajev med opravljanjem dela. Ozaveščanje o korakih uspešnega dela izredno pomembno. Po predstavitevi cilja smo eno izmed prvih ur namenili učenju pravilnega izvajanja gibalnih vzorcev med delom. Naučili smo se, kako pravilno, neboleče dvigujemo težka bremena, kako se pravilno sklanjamamo pri pobiranju, vijačenju, barvanju lesa in kako pravilno potiskamo težak predmet. Z vzgojo in ozaveščanjem o pomenu zdravja hrbtnice bomo zaradi pozitivnih odzivov nadaljevali.

**Ključne besede:** delo, ergonomija, ogrevanje, vzgoja, zdravje

## **Education for the appropriate work preparation – cross-curricular connection between Craft lessons and Sport for health (elective subject)**

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Primary school curriculum supports cross-curricular approach. It aims at applying a higher level of connection among disciplinary skills and it increases the quality and duration of the gained knowledge. Moreover, it also prepares students for a better life, forming a more self-confident personality who will be able to tackle the growing environmental challenges, following one of the course outlines of craft lessons. Cross-curricular approach can be used and bring craft lessons together with an elective subject called sport for health. It is our wish to show the importance of getting well prepared for work, thus maximizing the outcome and minimizing the risk of injury. We decided to make a new DIY sofa set school conversation corner and actively involve students in the process. We wanted to emphasize the importance of good preparation and organization, including warming-up and taking care of being able to lift heavy burdens – following the moving safety tips and using the correct techniques to help prevent injur and how to lift heavy objects properly. After presenting the goals we focused on motor nerve patterns during the working process. We learnt about various lifting, pulling and pushing techniques that help us to lift heavy objects without hurting our joints or not to cause back pain and the like. We will continue raising awareness about back health.

**Keywords:** work, ergonomics, warming-up, education, health

## Otroci v gibanju – ljudske plesne igre

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Plesne igre od začetka šolskega obdobja dalje sistematicno in postopoma nadgrajujejo gibalne kompetence in učenje posameznika z vrstniki, hkrati pa razvijajo in krepijo celostni razvoj otroka. Plesne igre so skupinske, kjer plesalci razvijajo elemente ritmičnosti skozi različne gibalne vzorce, kot so hoja, tek, skoki in poskoki, v vsiljenem ritmu z uporabo lastnih glasbil, zvočil in melodičnih instrumentov. Pri poustvarjanju plesnih iger je poudarek na urjenju osnovnih ritmičnih korakov in obvladovanju lastnih gibov, v orientaciji v prostoru ter poenotenuju plesnih gibov s soplesalci. To plesno dejavnost učenci najraje izvajajo v avtentičnem okolju, kjer si najdejo pripomočke za spremljavo iz naravnih materialov. Z uporabo domišljije pogosto usvojen osnovni plesni vzorec prilagodijo ali ga spremenijo z izmišljanjem novih gibov. Plesne igre so preproste, napete, zabavne, včasih tekmovalne in imajo jasna pravila, zato so vabljive tudi za njihove vrstnike zunaj folklorne dejavnosti. Namen prispevka je predstaviti gibalno aktivnost – plesne igre, v razširjenem programu osnovne šole pri interesni dejavnosti folklora ter razumeti pomen le-teh za nadaljnji gibalni razvoj otroka. Ugotavlja se, da otroci naučene plesne igre ponotranjijo in postanejo del njihovega gibalnega in igrальнega repertoarja. Usvojeni plesni vzorci postanejo podlaga za učenje zahtevnejših plesnih korakov, zato je zelo pomembno, da otrok postopno razvija, utrujuje in izpopolnjuje te gibalne kompetence.

**Ključne besede:** otroci, gibanje, igra, ples

## **Children in motion – folk dance games**

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From the start of the school period, dance games systematically contribute to upgrading motor competence, cooperative learning with peers, and simultaneously develop child's general development. Dance games are group games where dancers develop rhythmical elements through elementary movement patterns, such as walking, running, and jumping in involuntary rhythm of their own musical instruments. The emphasis at recreating dance games is on practicing basic rhythmical steps and commanding one's own movement, spatial orientation, and harmonizing dance moves with dancing partners. Children often adjust basic dance patterns with the help of their imagination, or they change it by making up new moves. Dance games are simple, exciting, fun, sometimes competitive, have clear rules, and are inviting for their peers outside of the folklore activity. The goal of this article is to discuss physical activity – dance games in extended primary school program at the folklore interest activity, and to understand the importance of this for child's motor development. Children internalize dance games and they become a part of their everyday life as well as a part of their movement and dancing repertoire. The learned dance patterns become a foundation for learning more complex dance steps. Thus, it is very important for children to gradually develop, reinforce and upgrade their motor competence.

**Keywords:** children, movement, games, dancing

## **Možnost za gibalne dejavnosti na prostem na podružnični osnovni šoli Trje**

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Potreba po gibanju je za človeka naravna. Gibanje pozitivno vpliva na razvoj mišic, kosti in sklepov, na telesno težo, naše zdravje in dobro počutje. Z gibanjem krepimo naš imunski sistem, samopodobo, izboljšujemo koncentracijo in spomin. Zato na podružnični osnovni šoli Trje v oddelkih podaljšanega bivanja v času sprostitev in ustvarjalnega preživljanja prostega časa veliko pozornosti namenimo gibanju in igri na prostem v neposredni okolini šole. Na svežem zraku učenci uživajo, se sprostijo, se igrajo in družijo, navezujejo stike, ustvarjajo, razvijajo svojo motoriko telesa, pridobivajo kondicijo in energijo za delo. Na izbiro imamo veliko površin, ki jih učitelji lahko uporabimo pri samem pouku: igrišče z igrali, igrišči za tenis in odbojko, gozd z gozdno učno potjo, fitnes na prostem in parkirišče s poslikavami iger. V prispevku bom predstavila okolico podružnične osnovne šole Trje in kako jo učitelji v podaljšanem bivanju vključujemo v naš vsakdan.

**Ključne besede:** gibanje, šolsko okolje, oddelek podaljšanega gibanja, aktivnosti na prostem

## **Opportunities for outdoor activities at the branch primary school Trje**

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For humans the need for movement is natural. The movement has a positive effect on the development of muscles, bones and joints, body weight, on our health and well-being. With movement, we strengthen our immune system, develop positive self-esteem, improve concentration and memory. Therefore, at the branch primary school Trje, a lot of attention is paid to playing and outdoor activities in the immediate surroundings of the school in the extended stay classes during relaxation activities and creative leisure time. In fresh air, students enjoy, relax, play and socialize, make contact, create, develop their motor skills, gain condition and energy to work. At our school we can choose from a lot of surfaces, which teachers can use in their lessons: children's playground, a tennis court, a volleyball court, a forest with a forest learning path, an outdoor fitness and a parking lot with game painted on the pavement. In the paper I will present the surroundings of the branch primary school Trje and how they are included in the extended stay by teachers in our everyday school life.

**Keywords:** movement, school environment, extended stay classes, outdoor activities

## **Učinki inkluze judoistov z raznolikimi sposobnostmi**

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**Uvod:** Inkluzija otrok in mladostnikov z raznolikimi sposobnostmi v običajna športna okolja izhaja iz človekovih pravic. Temelji na načelu enakih možnosti in skozi prakso vzgaja udeležence za sprejemanje različnosti posameznika. Redna športna aktivnost otrok in mladih z raznolikimi sposobnostmi vpliva tudi na njihovo splošno psihofizično počutje in gibalne sposobnosti, kar se po mnenju staršev odraža pri vsakodnevnih aktivnostih in opravilih.

**Metode:** V pilotski raziskavi učinkov inkluze judoistov z raznolikimi sposobnostmi se osredotočamo na osebno doživljanje vključenih in njihovih staršev. Metoda raziskovanja je analiza socialnih omrežij z merjenjem socialne opore. Glavni vir podatkov pilotske raziskave je vprašalnik.

**Rezultati:** Z rezultati pilotske raziskave želimo pridobiti globlji uvid članov inkluzivnega judo kluba v osebno doživljanje inkluze na socialnem in gibalnem področju.

**Razprava in zaključek:** Merjenje socialne opore med športniki v inkluzivnem okolju še ni bilo raziskovano. Z vpogledom v socialna omrežja članov inkluzivnega športnega društva ter v kvaliteto in moč njihovih medsebojnih vez bomo lahko po analizi podatkov, z rezultati raziskave pripomogli k večji prepoznavnosti in smotrnosti inkluze v športu ter spodbudili običajne športne organizacije za večje vključevanje vseh ljudi v svoje programe.

**Ključne besede:** inkluzija, športno društvo, socialna omrežja, etika vključevanja, vpliv na vsakodnevne aktivnosti

## **The influence of inclusion of judoists with diverse abilities**

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**Introduction:** The inclusion of children and adolescents with diverse abilities into ordinary sports environments derives from human rights. It is based on the principle of equal opportunities and it, through practice, educates participants to accept the diversity of the individual. Regular sports activity of children and young people with diverse abilities also influences their general psychophysical well-being and motor skills, which is, according to their parents, reflected in everyday activities and tasks.

**Methods:** In the pilot study of the influence of the inclusion of judoists with diverse abilities, we focus on the personal experience of the surveyees and their parents. The method of research is the analysis of social networks with the measurement of social support. The main source of the pilot survey data is the questionnaire.

**Results:** The results of the pilot study are expected to give us a deeper insight into how the members of the inclusive judo club feel inclusion influences their social sphere and motor abilities.

**Discussion and conclusion:** The measurement of social support among athletes in an inclusive environment has not yet been examined. Data analysis, research results and the insight into both the social networks of inclusive sports club members and the quality and strength of their interrelationships, will enable us to contribute to greater visibility and efficiency of inclusion in sport and encourage ordinary sports organizations to increase the inclusion.

**Keywords:** inclusion, sports club, social networks, inclusion ethics, impact on daily activities

## **Gibalna aktivnost in obvladovanje stresa dijakov in študentov zdravstvene nege**

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**Uvod:** Gibalna aktivnost je eden izmed najbolj učinkovitih načinov obvladovanja stresa. Pomembno je, da se tega zavedajo tudi mladi, ki so med izobraževanjem močno izpostavljeni stresnim situacijam.

**Metode:** Raziskava je temeljila na opisni neeksperimentalni kvantitativni metodi empiričnega raziskovanja. Zbiranje podatkov s strukturiranim vprašalnikom je potekalo na Srednji zdravstveni šoli Ljubljana ter Fakulteti za zdravstvo Angele Boškin od marca do maja 2017. Namenski vzorec je predstavljalo 61 polnoletnih dijakov in 98 študentov. Realizacija vzorca je bila 79,5%. Statistična analiza je bila izvedena s programom SPSS Statistics 23.

**Rezultati:** Glavni razlog ukvarjanja z gibalnimi aktivnostmi dijaki in študenti zaznavajo v možnostih sproščanja napetosti ( $M = 4,27$ ;  $SD = 0,98$ ). 78,7 % dijakov in 91,8 % študentov meni, da tako lažje obvladujejo vsakodnevne stresne situacije. S pogostejšim ukvarjanjem z gibalnimi aktivnostmi se statistično pomembno znižuje zaznavanje duševnih ( $r_s = 0,174$ ,  $p = 0,029$ ) ter vedenjskih ( $r_s = 0,193$ ,  $p = 0,015$ ) simptomov stresa.

**Razprava:** Dijaki in študenti zdravstvene nege se zavedajo pozitivnih učinkov gibalne aktivnosti na obvladovanje stresa in izboljšanje razpoloženja ter se z njo v večini tudi ukvarjajo. Mlade bi bilo priporočljivo še dodatno motivirati, jih opremiti s praktičnimi in teoretičnimi znanji ter jim omogočiti kakovostne pogoje za izvajanje gibalne aktivnosti tudi v študijskem okolju.

**Ključne besede:** zdravstvena nega, izobraževanje, mladostništvo, stres, gibanje

## **Physical activity and stress management in nursing students**

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**Introduction:** Physical activity (PA) has been recognized as one of the most effective stress managing techniques. For students it is crucial to acknowledge the effects of PA, since their target group has been contemporary identified as being under the strong influence of stress.

**Methods:** Our survey was based on descriptive non-experimental quantitative research method. A structured questionnaire was employed for data collection by students of Secondary School of Nursing in Ljubljana and Angela Boškin Faculty of Health Care in Jesenice in the time frame of March and May, 2017. Purpose sampling included 61 persons of full age at the secondary school and 98 faculty students and reached 79.5 % level of realisation.

**Results:** Our respondents mostly carry out PA as they believe it reduces their tension ( $M = 4.27$ ;  $SD = 0.98$ ). 78.7 % high school students and 91.8 % faculty students find it easier to manage everyday stressful situations this way. Based on our purpose sample, we can confirm that PA significantly reduces the occurrence of mental ( $rs = 0.174$ ;  $p = 0.029$ ) and behavioural ( $rs = 0.193$ ;  $p = 0.015$ ) stress symptoms.

**Discussion:** Students acknowledge PA as beneficial stress management option and as mood lifter, whereas employing it in their daily practices. It would be recommendable to additionally motivate students in this field, to equip them with practical and theoretical knowledge and to provide supportive circumstances for their regular PA in their educational surroundings.

**Keywords:** health care, education, adolescence, stress, physical activity

## Športna aktivnost osnovnošolcev

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Telesna neaktivnost in sedeč življenjski slog spadata med pomembne dejavnike tveganja za razvoj bolezni sodobnega človeka. Zmerna telesna aktivnost vpliva na izboljšanje zdravja, vzdržuje telesno težo ter vpliva na psihično dobro počutje. Šport oz. njegova različica športna rekreacija ima pri zorenju otrok v družini izjemno pomembno mesto. Znano je, da je prav v zgodnjem otrokovem obdobju mogoče najučinkoviteje vplivati na njegov celostni razvoj, še zlasti pa na njegov motorični oz. gibalni razvoj. V številnih raziskavah so ugotovili, da redna športna aktivnost pomaga oblikovati pozitivna stališča do nje in da bodo učenci kot rezultat izboljšanja stališč razvili bolj aktiven življenjski slog. Z našo anketo smo to tudi potrdili. Vse več učencev se zaveda, da je športna aktivnost zelo pomembna za zdravje, za boljši telesni in motorični razvoj. Ko govorimo o športni aktivnosti otrok in mladih, mislimo pravzaprav na celotno dejavnost, ki je povezana z delom mišic: igro, pouk športne vzgoje v šoli in športno rekreativno dejavnost. Šport ni zgolj sam sebi namen, nima pomena le v okviru telesne aktivnosti, rekreacije ali vrhunskosti, temveč je lahko sredstvo, s katerim se otroke usmerja, vzgaja in kjer se jim oblikujejo določene vrednote. Z njim se otroci učijo osnovnih vrednot.

**Ključne besede:** otroci, gibanje, zdravje

## **Sports activities of primary school students**

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Physical inactivity and sedentary lifestyle are among the important risk factors for the development of modern human disease. Moderate physical activity affects the improvement of health, maintains body weight and affects mental well-being. Sports or its version of sports recreation has an extremely important place in the maturing of children in the family. It is known that it is precisely in the early childhood period that it can be most effective in influencing its overall development, and especially in his motorcycle, motion development. In many studies, it has been found that regular sports activity helps to shape positive attitudes towards it, and that pupils as a result of improving attitudes will develop a more active lifestyle. We confirmed this with our survey. More and more students are aware that sports activity is very important for health, for better physical and motor development. Speaking about the sports activities of children and young people, we mean, in fact, the whole activity, which is related to the work of muscles: play, sports education in school and sports and recreational activity. Sports is not just an end in itself, it does not matter only in the context of physical activity, recreation or excellence, but it can be a means by which children are directed, educated, and where certain values are formed. With it, children learn basic values.

**Keywords:** children, movement, health

## Mladostnik in gibalna aktivnost

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**Uvod:** Po razpoložljivih podatkih za Slovenijo smo za zaščito svojega zdravja premalo telesno dejavni, saj se pomemben delež odraslih in mladih prema-  
lo giblje in ukvarja s športom. Posledično se povečuje nastanek dejavnikov tveganja za nastanek srčno-žilnih obolenj in dokazano je, da je telesna nedejavnost pomemben dejavnik tveganja.

**Metode:** Raziskava je temeljila na kvantitativni metodi dela. Sodelovalo je 199 (50,3% fantov) starih 15 in 17 let. Raziskovalni vzorec je opisan na podlagi frekvenčnih vrednosti in pripadajočih odstotkov. Vrednost  $p<0,05$  je določala mejo statistične značilnosti.

**Rezultati:** Rezultati so pokazali, da je 89 (44,7 %) udeležencev študije gibalno aktivnih. V organizirane gibalne/športne aktivnosti (G/ŠA) je vključenih 55 le (27,6 %) mladostnikov. Rezultati so pokazali, da ne obstajajo statistično značilne razlike v starosti glede na vključenost v G/ŠA ( $p=0,776$ ). Prav tako nismo našli statistično pomembne razlike med gibalno aktivnostjo fantov in deklet ( $p=0,255$ ).

**Razprava in zaključek:** Z raziskavo ugotavljamo, da je več kot polovica anketiranih mladostnikov gibalno neaktivnih. Starost in spol mladostnikov pri tem ne igrata pomembne vloge. Trend otrok, vključenih v G/ŠA je zaskrbljujoče nizek. Potrebe po ozaveščanju mladih o preprečevanju nastanka dejavnikov tveganja za razvoj kroničnih nenalezljivih bolezni so vsak dan višje. Z ustanovitvijo Centrov za krepitev zdravja in vstopom zdravstvenega kadra v šole imamo enkratno priložnost, da motiviramo mladostnike za zdrav življenjski slog, za gibalno aktivnost.

**Ključne besede:** mlađi, gibanje, motivacija, športne aktivnosti

## **Teenagers and physical activity**

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**Introduction:** According to the available data, Slovenians are not active enough. As a consequence, risk factors for cardiovascular diseases are rapidly increasing and it has been proven that low physical activity is the main factor.

**Methods:** The present study was conducted using quantitative research methods. 199 (50.3 % boys) adolescents aged 15 and 17 years were included in the study. The research sample was described using frequency values and corresponding percentages. The  $p < 0.05$  value determined the limit of statistical significance.

**Results:** The results showed that 89 (44.7 %) of participants in the study were physically active. The results showed there are no statistically significant differences between the ages of the participants. Similarly, we did not find statistically significant differences between the physical activity of boys (55.1 %) and girls (44.9 %) ( $p=0.255$ ).

**Discussion and conclusion:** Apart from teenagers, who are practicing a chosen sport, we concluded, that most teenagers are not physically active at all. The differences in age and sex did not show much deviation. The trend among teenagers participating in the study is worryingly low.

The need of making teenagers aware of how to lower risk factors for cardiovascular diseases, is increasing each day. With establishing Health Centers and entering schools with medical personnel, we have a great chance to motivate teenagers to pursue healthy and active lifestyle.

**Keywords:** teenager, physical activity, motivation

## **Bodi aktiven – postani jadralec**

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Na šoli veliko pozornosti posvečamo spodbujanju otrok k aktivnemu preživljjanju prostega časa. Želimo si, da bi bil vsak učenec športno aktiven, zato jim ponujamo različne športne dejavnosti. Za vse četrtošolce organiziramo 25-urni tečaj jadranja, ki ga izvajamo septembra v okviru rednega pouka. Naš cilj je navdušiti učence za jadranje, ki ima v Izoli dolgo tradicijo, a je med otroki manj priljubljen šport. Tečaj vodijo trenerji Jadralnega kluba Burja. Kombiniramo ga s poukom naravoslovja, družbe, likovne umetnosti in slovenščine. Medpredmetno povezovanje je namreč eno temeljnih pedagoških načel sodobnega pouka. Tečaj poteka v prostorih kluba, kjer se učenci najprej seznanijo z jadrničico in njenimi sestavnimi deli ter z osnovnimi teoretičnimi izhodišči. Sledi jadranje v optimistu v zalivu izolske marine in potem še na odprttem morju. Za strokovnost in varnost poskrbijo trenerji z opravljeno licenco. Tečaj izvajamo že več let in ugotavljamo, da se je število aktivnih jadralcev med otroki občutno povečalo. Mnogi se namreč nad športom navdušijo ter aktivno nadaljujejo z jadranjem kot člani kluba, zato na šoli načrtujemo, da bomo s tako obliko dela nadaljevali.

**Ključne besede:** medpredmetno povezovanje, športne dejavnosti, tečaj jadranja

## **Be active – become a sailor**

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In our school, we pay a lot of attention to encouraging children to spend their spare time actively. We wish for every student to be active in sports. Therefore, we offer them different sports activities. We organize a 25-hour sailing course for all the fourth graders. We perform the course in September as a part of regular school lessons. Our goal is to enthuse the students for sailing which has a long tradition in Izola. However, this sport is less popular among children. The course is performed by the coaches of the Burja Sailing Club. We combine it with school lessons of natural sciences, social sciences, arts, and Slovenian language. Cross-curricular integration is namely one of the basic educational principles of modern school lessons. The course is performed on the premises of the club where the students first get acquainted with the sailing boat, its component parts, and basic theoretical starting points. After that, the students sail in the optimist in the bay of Izola Marina and later, on the high seas. Coaches with the license are responsible for the procedure to be performed professionally and safely. We have been performing the course for several years and we have realized that the number of active sailors increased substantially among children. Many become enthusiastic about the sport and continue to sail actively as the members of the club. Therefore we plan at our school to continue with such a form of work.

**Keywords:** cross-curricular integration, sports activities, sailing course

## **Pomen telesne aktivnosti za kvalitetno življenje otrok**

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Redna telesna dejavnost je ključnega pomena za razvoj, zdravje in splošno dobro počutje otrok in mladostnikov, saj ne vpliva le na telesni in gibalni razvoj, ampak tudi na razvoj umskih sposobnosti, zmanjšuje verjetnost nastanka kročnih bolezni in varuje pred prekomerno telesno težo ter debelostjo. Za doseganje koristi zdravja in razvoja otrok in mladostnikov je po priporočilih Svetovne zdravstvene organizacije potrebno vsaj šestdeset minut gibanja dnevno, vse dni v tednu. Na izvajanje telesne dejavnosti vplivajo osebni dejavniki in dejavniki okolja. Večina otrok ne dosega predlaganih dnevnih priporočil izvajanja telesne dejavnosti, ki se s starostjo še zmanjšuje. Med ukrepe za spodbujanje zdrave telesne dejavnosti spada izvajanje vzgoje za zdravje, ki obsega tako aktivnosti za posamezne starostne skupine otrok, kot ozaveščanje staršev in strokovnih delavcev v vrtcih in šolah. Za izvajalce zdravstvene vzgoje v Sloveniji so dobro izhodišče za delo delavnice Nacionalnega inštituta za javno zdravje, ki pokriva teme za spodbujanje zdravega načina življenja otrok in mladostnikov. Namen prispevka je raziskati pomen telesne dejavnosti ter vzgoje za zdravje pri razvoju otrok in mladostnikov. Za zdrav razvoj otrok in mladostnikov je pomembno spodbujati naravne potrebe po gibanju in omogočanje varnega izvajanja telesne dejavnosti. Vzgoja za zdravje in spodbujanje zdrave telesne dejavnosti otrok in mladostnikov je usmerjena v pridobivanje znanja o zdravju in bolezni. Osnovni cilj izvajalcev vzgoje za zdravje je pomoč otrokom pri vzpostavljavi naklonjenega odnosa do gibanja, ter spodbujanje k izvajaju zdrave telesne dejavnosti.

**Ključne besede:** gibanje, zdrave navade, vzgoja za zdravje

## **The role of physical activity in children's quality of life**

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Regular physical activity is crucial for the development, health and general well-being of children and adolescents, as it affects not only the physical and emotional development, but also the development of cognitive abilities, reduces the likelihood of developing chronic diseases and protects against overweight and obesity. In order to achieve the health and developmental benefits of children and adolescents, the World Health Organization recommends at least 60 minutes of physical activity daily every day of the week. Personal and environmental factors influence the performance of physical activity. Most children do not meet the daily recommendations for carrying out the physical activity, which decreases with age. Among the measures to promote a healthy physical activity is the implementation of health education for children and adolescents, as well as the raising awareness among parents and professionals in kindergartens and schools. The workshops of National Institute of Public Health, which promote a healthy lifestyle for children and adolescents, are a good starting point for work for healthcare providers in Slovenia. The purpose of this review is to explore the role of physical activity and health education in the development of children and adolescents. For the healthy development of children and adolescents, it is important to promote the natural need for motion and to facilitate a safe performance of physical activity. Health education and promotion of healthy physical activity for children and adolescents is aimed at acquiring knowledge about health and illness. The primary goal of health education providers is to help children develop a favorable attitude towards motion and to promote healthy physical activity.

**Keywords:** motion, healthy habits, health education

## Kontrola drže in ravnotežja pri otrocih s cerebralno paralizo po hipoterapiji

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**Uvod:** Nadzor in upravljanje drže je sposobnost telesa, ki z več senzorično motoričnimi procesi vzdržuje pokončni položaj. Pri otrocih s cerebralno paralizo (CP) pa so ti procesi pogosto omejeni zaradi težav v enem ali več sistemih. Hipoterapija je terapija, pri kateri se uporablja konja, ki s svojim tridimenzionalnim gibanjem omogoča vzpostavitev in nadzor drže kot tudi ravnotežja. V članku je pripravljen povzetek pregleda literature, ki opisuje učinek hipoterapije in terapevtskega jahanja na kontrolo drže in ravnotežja pri otrocih s CP. **Metode:** S sistematsko metodo pregleda literature je pregledan vpliv hipoterapije in terapevtskega jahanja na kontrolo drže in ravnotežja pri otrocih s CP. S ključnimi besedami (therapeutic horseback riding, equine movement therapy), so bili članki ( $n = 36$ ) iskani v baza podatkov: COBISS, PEDro, CINAHL, Springer link, PubMed, Web of Science, Ebsco host in ProQuest.

**Rezultati:** Od 36 člankov po vključitvenih kriterijih (objavljeni članki, IMRD metoda in preiskovani vpliv hipoterapije in terapevtskega jahanja) je v ožji izbor zajetih 9 člankov. V vseh devetih člankih avtorji omenjajo pozitivni učinek na kontrolo drže in ravnotežja. **Zaključek:** Povzetek rezultatov znanstvene literature o pozitivnem učinku hipoterapije in terapevtskega jahanja na kontrolo drže in ravnotežja pri otrocih s cerebralno paralizo daje temelje za nadaljnje raziskave.

**Ključne besede:** hipoterapija, terapevtsko jahanje, cerebralna paraliza, kontrola drže, ravnotežje

## **Postural control and balance in children with cerebral palsy after hypotherapy**

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**Introduction:** Postural control and management of the posture is the ability of the body to maintain an upright position with more sensory motor processes. At children with cerebral palsy (CP), these processes are often limited due to problems in one or more systems. Hypotherapy is a therapy which uses the horse and with its three-dimensional movement, enables to connect and control the posture as well as the balance. The article summarizes the literature review, which describes the effect of hypotherapy and therapeutic riding on the control of posture and balance in children with CP.

**Methods:** The systematic method of the literature is reviewed, the effect of hypotherapy and therapeutic riding to the control of posture and balance of children with CP. With keywords (therapeutic horseback riding, equine movement therapy), articles were searched in the database: COBISS, PEDRO, CINAHL, Springer link, PubMed, Web of Science, Ebsco host and ProQuest.

**Results:** Out of 36 articles according to inclusion criteria (published articles, IMRD method and investigated influence of hypotherapy and therapeutic riding), 9 articles are included in the shortlist. In all 9 articles, the authors mention a positive effect to the control of posture and balance.

**Conclusion:** Summary of the results of scientific literature on the positive effect of hypotherapy and therapeutic riding to the control of posture and balance at children with cerebral palsy provides the foundations for further research.

**Keywords:** hypotherapy, therapeutic riding, cerebral palsy, posture control, balance

## Vpliv športnih dejavnosti na socializacijo mladostnikov

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**Uvod:** V obdobju sekundarne socializacije prične človek prevzemati različne družbene vloge. Mladi v današnjem svetu živijo v dobi razcveta spletnih družbenih omrežij, ki jih uporabljajo nekaj ur dnevno, imajo sedeč življenjski slog in izgubljajo interes za fizične aktivnosti. Dejstvo je, da nezadostna fizična aktivnost neugodno vpliva na rast in razvoj. Mnoge raziskave poudarjajo, da športne dejavnosti pozitivno vplivajo na telesni in socialni razvoj.

**Metode:** V prispevku smo uporabili deskriptivno metodo dela, opravili smo sistematičen pregled literature v angleškem jeziku. Literaturo, objavljeno med letoma 2008 in 2018, smo iskali v podatkovnih zbirkah Pubmed, Cochrane Library, Science direct, ERIC, Web of Science in DIKUL.

**Rezultati:** Rezultati uporabljenih študij so pokazali, da šport pozitivno vpliva na telesno in duševno zdravje ter na razvoj socialnih spretnosti pri mladih. Gre za sledeče učinke: dober vpliv na rast in razvoj otrok, razvoj občutka pripadnosti, ustvarjanje identitete, učenje vrednot, vzorcev obnašanja v skupini, navezovanje prijateljstev, reševanje konfliktov ter razvoj komunikacijskih spretnosti.

**Diskusija:** V sodobni družbi prevladuje sedeč življenjski slog, za katerega je značilna fizična nedejavnost. Številne organizacije promovirajo šport kot obliko fizičnih dejavnosti, toda spremembu življenjskega sloga je kompleksen proces, ki zahteva mnogo truda, preden bodo zaznane pozitivne spremembe tudi na področju socializacije.

**Ključne besede:** šport, fizična aktivnost, mladostniki, socializacija, socializacija preko športa

## **The impact of sports activities on the adolescent's socialization**

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**Introduction:** Secondary socialization refers to the process when individuals begin to enrol in various social roles. Young people live in a period of growing social media network and they spend several hours daily using it, have a sedentary lifestyle and lose interest in physical activity. Lack of physical activity can impair teenagers healthy growth and development, and negatively affect their physical and mental health. Research shows that sports provide physically and socially development.

**Methods:** Literature review as a descriptive research method was used in this article. We identified studies form searching literature in English language, published from 2008 - 2019 in following databases: Pubmed, Cochrane Library, Science direct, ERIC, Web of Science and DIKUL.

**Results:** The results of studies report many positive effects of sport on physical and mental health, and also on development of social skills. There are effects such as impact on growth and development of children, sense of belonging, development of their identity, learning different values, patterns of behaviour, building friendship, they can teach to prevent and solve conflicts and improve communication.

**Discussion:** The modern lifestyle is mostly sedentary, and its main characteristic is lack of physical activity. Many organizations promote sport as a form of physical activity but a lifestyle change is a complex process that requires a lot of effort before positive effects on socialization can be detected.

**Keywords:** sport, physical activity, adolescent, socialization, sport socialization

## Vpliv skeletne rasti na kinestezijo - najstniška nerodnost

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**Uvod:** V času adolescence je kinestezija prizadeta. Znano je, da se pri najstnikih pojavi tako imenovana "najstniška nerodnost", ki je povezana s številnimi poškodbami. Namenski je predstaviti, ali pospešena skeletna rast (PSR) vpliva na kinestezijo, saj obdobje vključuje razvoj mišično-vezivnega sistema. Zaznavanje gibanja in drže omogočajo senzorični receptorji, h kinesteziji pa prispevata tudi vestibularni in vidni sistem.

**Metode:** S pomočjo neinvazivnih metod so bili določeni subjekti s PSR in temu je sledilo testiranje površinskega občutnenja in bolečine, repozicije ledvene hrbtnice in kolenskega sklepa, reprodukcije sile v kolenskem sklepu, orientacije v prostoru, skoka z nasprotnim gibanjem, statičnega ravnotežja v stoječem (SRST) in sedečem položaju (SRSE) ter agilnosti.

**Rezultati:** Statistično značilna razlika je bila le pri površinskem občutenu (sposobnosti dvotočkovnega razlikovanja dotika). Razlike med skupinama so bile tudi v upogibu kolena, pri skoku z nasprotnim gibanjem, pri SRST in SRSE, toda niso bile statistično značilne.

**Razprava in zaključek:** Raziskava je pojasnila, da se otroci v času skeletne rasti ne spopadajo s senzoričnimi ali motoričnimi ovirami, kot je dokazano pri starejših odraslih. Lahko bi sklepali, da je najstniška nerodnost posledica tako imenovane emocionalne kontrole gibanja, kjer je motorični odgovor izbran v kratkem času (beg ali boj) in je odgovor viden kot nerodnost, saj se posameznik slabše zaveda procesa izbire.

**Ključne besede:** kinestezija, skeletna rast, razvoj, osrednje živčevje, nerodnost

## **Influence of skeletal growth on kinesthesia - adolescence awkwardness**

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**Introduction:** During adolescence the kinaesthesia is affected. It is known that young people may experience the so-called "adolescent awkwardness" (AA), which is associated with numerous injuries in children. The aim is to present if accelerated skeletal growth (ACSG) affects kinaesthesia since the period includes development of muscular system and connective tissue. Sensing the movement and body posture is done by sensory receptors whereas also vestibular and visual system contribute to the kinaesthesia.

**Methods:** After defining the subjects with ACSG using non-invasive methods, the testing of surface sensation and pain, lumbar spine and knee joint reposition, torque reproduction and dynamic tracking in the knee, orientation in the space, counter movement jump (CMJ) and static equilibrium in standing (SEST) and sitting (SESI) position and agility test was done.

**Results:** The statistically different results were only in test of surface sensation (min distance of a two-point touch). There were differences in knee flexion, CMJ, SEST and SESI, but were not statistically significant.

**Discussion and conclusion:** The study explained that children do not experience sensory or motor disorders during SG, as has been demonstrated in older adults. We can conclude that AA could be a result of the so-called emotional control of locomotion, where efferent is chosen in short period (fight or flight mode) and is visible as a motor awkwardness whereas the individual is largely unaware of process.

**Keywords:** kinesthesia, skeletal growth, development, central nervous system, awkwardness

## **Učinek dihalnih vaj pri otrocih s spinalno mišično atrofijo**

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**Uvod:** Spinalna mišična atrofija (SMA) je avtosomna recessivna nevrodegenerativna bolezen v otroštvu za katero je značilna degeneracija in izguba spodnjih motoričnih nevronov v celicah sprednjih rogov hrbtenjače, kar povzroča progresivno proksimalno šibkost in atrofijo skeletnih mišic. Vzrok SMA je homozigotna mutacija v genu SMN1.

**Metode:** Namen študije je bil raziskati učinek dihalnih vaj na pljučno funkcijo pri otrocih s SMA. V raziskavi je sodelovalo 9 otrok s SMA, ki so bili vključeni v program 2-tedenske obnovitvene rehabilitacije. Poleg ostale dnevne terapije so imeli še dodatnih 20 minut specialne respiratorne vadbe. Meritve smo izvajali s spirometrom Vitalograph In2itive v sedečem in v ležečem položaju.

**Rezultati:** Po končani obravnavi je pri otrocih prišlo do rahlega izboljšanja pljučne funkcije. Otroci z blago obliko SMA so imeli boljše rezultate, kot otroci s hujšo obliko SMA. Otroci, ki so imeli višji indeks telesne mase (ITM) so imeli večjo VC, kot otroci z nižjim ITM.

**Razprava in zaključek:** Pri otrocih s SMA lahko pride, zaradi oslabelosti dihalnih mišic in posledične restriktivne dihalne okvare, do dihalne odpovedi, ki predstavlja glavni vzrok za morbiditeto in umrljivost teh otrok. Z našo študijo smo ugotovili, da je po 14 dnevni dihalni vadbi pri otrocih s SMA prišlo do rahlega izboljšanja pljučne funkcije. Menimo, da je dihalna vadba pri otrocih s SMA koristna in priporočljiva.

**Ključne besede:** spinalna mišična atrofija, dihalne vaje, pljučna zmogljivost

## **Effects of respiratory exercises in children with spinal muscular atrophy**

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**Introduction:** Spinal muscular atrophy (SMA) is an autosomal recessive neurodegenerative disease in childhood characterized by the degeneration and loss of lower motor neurons in the front horn cells of the spinal cord, causing progressive proximal weakness and atrophy of the skeletal muscles. The cause of SMA is homozygous mutation in the SMN1 gene.

**Methods:** The aim of the study was to investigate the effects of respiratory exercises on pulmonary function in children with SMA. Nine children with SMA participated in the study were included in a 2-week rehabilitation program. In addition to other daily therapies, they had an additional 20 minutes of respiratory training. The measurements were performed with the Vitalograph In2itive spirometer in a seated and lying position.

**Results:** A slight improvement in pulmonary function occurred after treatment was completed. Children with a mild form of SMA had better results than children with a more severe form of SMA. Children who had a higher body mass index (ITM) had a higher VC than children with a lower BMI.

**Discussion and conclusion:** The weakness of respiratory muscles and consequent restrictive respiratory failure is the main cause of morbidity and mortality of children with SMA. In our study there was a slight improvement of pulmonary function in SMA children after 14 days of respiratory training. We conclude that respiratory training in children with SMA is helpful and advisable.

**Keywords:** spinal muscular atrophy, respiratory exercises, pulmonary capacity

## **Koraki k dvigu gibalne aktivnosti otrok**

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Zadnje čase spremljamo raziskave, ki kažejo, da se število predebelih mladostnikov povečuje. Vzroki za to so slabe prehranjevalne navade in nezadostna aktivnost otrok. Preživljanje prostega časa otrok se je močno spremenilo. Manj časa preživijo zunaj, v šolo pa čedalje manj prihajajo peš. Starši otroke vse pogosteje pripeljejo z avtom do vhoda šole, prav tako je tudi ob odhodu domov. Prihod v šolo peš je tako lahko prvi korak k večji telesni aktivnosti, kar pozitivno vpliva na njihovo zdravje. Na tem mestu je šola tista, ki s pozitivno spodbudo lahko postopoma spremeni potovalne navade mladih. Na naši šoli sem v letošnjem šolskem letu s pomočjo sodelavcev in podporo vodstva vzpostavila »Peš četrtek«. To je dan v tednu, ko otroci v spremstvu učiteljev v vseh vremenskih razmerah prihajajo v šolo peš. Otroci na poti v šolo uživajo v družbi svojih sošolcev in prijateljev in tako spoznavajo svoje vrstnike. Opažamo tudi, da pešačenje pozitivno vpliva na boljši učni uspeh, koncentracijo pri pouku, razvoj in samostojnost. Otrok, ki prihajajo v šolo peš, je danes veliko več, kar kaže na njihovo zadovoljstvo in sprejemanje. Ker si želimo, da te navade ohranijo in prakticirajo tudi v odraslosti, si bomo še naprej prizadevali k tej spodbudi.

**Ključne besede:** debelost, gibalna aktivnost, pešačenje, šola, otroci

## **Steps towards a greater physical activity of children**

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Recent researches show that the number of obesity in youth is increasing. The reasons for this are poor eating habits and an insufficient physical activity of children. The way of spending free time has changed greatly. Children spend less time outside and on rare occasions a few children come to school on foot. Parents usually take their children to school by car then leave them all the way up to the front of the school entrance. The arrival to school on foot has become the first step towards a greater physical activity, which positively affects pupil's health. At this point, the school is the one that can gradually change the travel habits of young people with a positive incentive. In this school year, with the help of my colleagues and the support of the management, I set up project called: »A Thursday on foot«. On this day of the week teachers accompany children on their way to school, which is done in all weather conditions. Children enjoy the company of their classmates and friends and thus become acquainted with their peers. Our teachers have also noticed that walking positively influences the learning success, concentration during lessons, pupil's development and autonomy. The number of children involved today is much higher compared to the initial walking to school, which shows their satisfaction and acceptance. Because we want to maintain these habits and practice into adulthood, we will continue to strive for this incentive.

**Keywords:** obesity, physical activities, hiking, school, children

## **Povečevanje gibalne aktivnosti otrok v podaljšanem bivanju**

**Matevž Živec**

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Vse manjša gibalna aktivnost otrok v današnjem času, je velik problem sodobnega življenjskega sloga. Ima negativne učinke na razvoj otrok, hkrati je dejavnik večje možnost obolenja za kronično nenalezljivimi boleznimi. Otroci za zapolnitev prostega časa vse pogosteje izbirajo dejavnosti, vezane na različne zaslone, od računalnika, pametnega telefona, tablice, do televizije in drugih. Gibanje jim predstavlja velik napor. Za zaustavitev omenjenih trendov morajo skupaj ukrepati tako starši kot učitelji. V oddelkih podaljšanega bivanja je mogoče opravljanje samostojnega učenja prestaviti iz časa po kosilu na štirinajsto uro. To pomeni, da imamo več kot eno uro časa za gibanje na prostem ali v telovadnici. To je čas, kjer lahko s pet minutnim vsakodnevnim tekom ogromno naredimo za zdravje in splošno kondicijo otrok. Tako otrokom ostane še dovolj časa za prosto igro. Otroci tek in gibanje na prostem hitro vzljubijo in kmalu postane njihov vsakdan. Izkazalo se je, da so rezultati po enomesečni praksi vzpodbudni. Na primeru dobre prakse vidimo, kako je že z majhnimi spremembami v šolski praksi mogoče povečati gibalno aktivnost otrok.

**Ključne besede:** OPB, tek, prvo vzgojno izobraževalno obdobje

## **Increasing physical activities of children in after school program**

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The decreasing physical activity of children today is a major problem in the modern lifestyle. It has negative effects on the development of children and increases the chance of illnesses in later period of life. Children increasingly choose activities that involve the use of different screen devices, such as a computer, a smartphone, a tablet or a television. Physical activities present a real struggle to them. These modern trends must be resisted by both, parents and pedagogues. The example of good practice shows, that it is possible to increase physical activity of children by making small changes in school practice. In the after school program, it is possible to shift the individual learning from the time after lunch to 2 p.m. This means that we have more than an hour for different indoor and outdoor activities. If this time is used for a daily five-minute run, this can improve children's health and physical condition and leaves enough time for children to play. Children soon develop a growing fondness for running activities in their daily lives. Even after a month of use, this approach has shown very encouraging and positive results with children.

**Keywords:** after school program, running, first educational period



# **Posterji**

## **Poster presentations**

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## **Podpora fizičnim aktivnostim v predšolski vzgoji na Češkem**

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Namen povzetka je predstaviti primerjavo med projektom Kurilkulum in njegovo realizacijo v predšolskem obdobju v Republiki Češki. Kot iztočnico za primerjavo so najprej analizirali Kurikulum vezan na gibalne aktivnosti. Izvedbo gibalne aktivnosti iz Kurikula so opazovali in primerjali na tedenski ravni v dveh različnih vrtcih: splošen program in program podpore zdravju. Podatke o količini in kvaliteti gibanja so zbrali s kronometrom in z metodo opazovanja. Rezultati so pokazali, da so otroci vključeni v program podpore zdravja bili bolj gibalno aktivni kakor otroci vključeni v splošni program. Rezultati so se razlikovali pri merjenju ustreznega okolja za otroke na predšolskih območjih.

**Ključne besede:** gibalne aktivnosti, Republika Češka, Kurikulum, zdravstvene storitve

## **Support of the physical activities in the pre-school education in Czech Republic**

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The goal of the article is to compare the physical activities curriculum and its realisation in the pre-school educational process in the Czech Republic. The starting point for the comparison is the content analysis of the curricular document focused on the physical activities. In addition to assessing the curriculum, an observation of the weekly program in two pre-schools was used: in a standard Czech pre-school and in a pre-school involved in a health-supporting pre-school program. The volume and the quality of the physical activities was observed with the chronometric and the direct observation methods. The collected inputs show more physical activities in the pre-school involved in a health-supporting pre-school program than in the standard Czech pre-school. Different results appeared in the measurement of the appropriate environment for children in pre-school areas. The results were compared with the curriculum requirements of the WHO recommendation for physical activities of children.

**Keywords:** physical activities, pre-school education, education in the Czech Republic, pre-school curriculum, services for supporting health

## Vključevanje videa v vzgojno-izobraževalne dejavnosti ozaveščanja otrok

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Pomemben del prehranske pismenosti otrok in staršev predstavlja njihova sposobnost kritičnega vrednotenja sestave in kakovosti ter izbiranja in nakupovanja živil. Otroci in starši so pogosto izpostavljeni različnim oglaševalskim pristopom, s katerimi proizvajalci želijo vplivati na nakupne odločitve potrošnikov. Pomembno je, da imajo otroci in starši ustrezno znanje, ki jim omogoča kritično presojo oglaševalskih sporočil. Omenjeno znanje lahko posredujemo z različnimi didaktičnimi sredstvi, med katerimi pomembno vlogo zavzema tudi različna informacijsko-komunikacijska tehnologija (IKT). Z izdelavo dveh 70-sekundnih videov, katerih vsebina spodbuja h kritičnemu nakupovanju živil, smo želeli informirati otroke in starše o vplivu oglaševanja na nakupovanje živil ter o pomenu ocenjevanja prehranskega profila živil v procesu nakupovanja. Videsta bila izdelana s klasično videotehniko, s katero so predstavljene različne situacije nakupovanja živil v trgovini, del vsebine pa je predstavljen z risano animacijo. Video in risana animacija se dopolnjujeta s priovedovanjem zgodbe ter podajanjem slikovnih in zvočnih zaključnih sporočil. Videata predstavljalata ustrezna didaktična sredstva, ki so namenjena formalnemu in priložnostnemu prehranskemu izobraževanju otrok in staršev. Vsebinsko in didaktično sta prilagojena njihovim potrebam ter omogočata spodbujanje otrok in staršev k nakupovanju zdravih živil in zdravemu prehranjevanju.

**Ključne besede:** video, otroci, starši, nakupovanje živil, izobraževanje

## **Video content in educational activities to raise awareness in children**

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An important aspect of nutrition literacy of children and parents are their abilities to critically assess nutritional values and quality as well as to make good decisions when buying food products. Children and their parents are increasingly exposed to different advertising techniques used by producers, who are trying to convince them into buying certain items. It is important for parents as well as their children to possess the tools needed for critical assessment of those techniques. Such tools can be taught using different educational techniques, with information and communication technology having an important role. The production of two 70-second-long videos promoting a more conscious acquisition of items, was aimed to inform children and their parents about the influence of advertising on their purchasing decisions and the importance of careful examination of nutritional profiles in the process of shopping. Both videos were made with classic filming techniques that present different situations all consumers face during shopping, and partly with animation techniques. Both video and cartoon animation are intertwined with the story narration and the key messages unfolding in image and sound form. The videos include teaching means suitable for formal and recreational dietary education of children and their parents. The content and didactics are suited to their needs and encourage them to buy and consume healthier foods.

**Keywords:** video, children, parents, purchasing food products, education

## Avtomati na fakultetah - priročna izbira, ali je tudi zdrava?

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Avtomati so pogosto priročna izbira za hiter prigrizek med predavanji. Njihova vsebina lahko vpliva na prehrano in vnos hrani tako študentov kot zaposlenih na fakulteti, kar ima posledično lahko vpliv na njihovo zdravje. Z raziskavo smo ocenili vsebino prodajnih avtomatov na slovenskih fakultetah in predlagali spremembe za bolj zdrave izbire. V letu 2017 in 2018 smo pregledali 36 avtomatov na 23 fakultetah v 3 mestih (Ljubljana, Maribor, Koper). Terensko delo so opravili magistri prehrane, raziskava pa je bila del projekta "Študent, Veš, kaj ješ?", ki ga je podprlo Ministrstvo za zdravje. Vsak prodajni avtomat je imel 48 oddelkov in je vseboval različno hrano in pihačo. V povprečju je bilo 35,4% sladkih pihač, in le 10,6% vode. Sladki in slani prigrizki so predstavljali okoli 33% vsebine avtomata, povprečno pa so tehtali več kot 50 g na kos. Večina sendvičev je vsebovala salame ali kuhanje klobase, le 8,7% je bilo vegetarianskih. Odstotek suhega sadja in oreščkov je bil zelo majhen (3,4%), večinoma pa so pakirani v prevelikih količinah (do 250 g). Od 36 pregledanih je le 13 avtomatov vsebovalo sveže sadje (jabolka ali mandarine). Večina mlečnih izdelkov je vsebovala čokolado ali sadje, ter dodani sladkor. Vsebina prodajnih avtomatov na slovenskih fakultetah ne ponuja zdrave izbire za študente in zaposlene. Za spodbujanje bolj zdrave izbire v prodajnih avtomatih smo na ZPS razvili smernice z vsebinskimi priporočili za fakultete in ponudnike prodajnih avtomatov.

**Ključne besede:** avtomati, študentje, zdrava izbira, priporočila

## **Vending machines – convenient choice, but is it healthy?**

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Vending machines are often convenient choice for a quick snack between lectures and may influence students or employees diet and nutrient intake, which could consequently affect their health. With our research we evaluated the content of vending machines located on Slovenian faculties and suggested changes to a healthier choice. In 2017 and 2018, 36 vending machines were reviewed at 23 faculties in 3 cities (Ljubljana, Maribor, Koper). The field work was carried out by master students of Food science and nutrition. Research was part of the project "Študent, Veš, kaj ješ?", supported by the Ministry of Health. On average 35.4 % of its content were sweetened drinks, water represented only 10.6 %. Sweet and savoury snacks represented around 33%, on average weighing more than 50 g a piece. Most sandwiches contained salami or boiled sausages, only 8.7 % were vegetarian. The percentage of dried fruits and nuts was very small (3.4 %), mostly they were packed in too large quantities (up to 250 g). Of 36 reviewed vending machines, only 13 contained fresh fruits (apples or mandarins). Of dairy products, most of them were chocolate or fruit flavoured and contained a lot of sugar. Evaluation of the content of vending machines at Slovenian faculties does not offer a healthy choice for students and employees. To encourage healthier choice in vending machines ZPS has developed guidelines with content recommendations for faculties and vending machine providers.

**Keywords:** vending machines, students, healthy choice, recommendations

## Ocena prehranskega profila živil, ki nagovarjajo otroke

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Nosilci živilske dejavnosti s svojimi proizvodi in z njihovo predstavtvijo pomembno vplivajo na prehranjevalne navade ljudi. Posebno ranljiva skupina so otroci, ki jih proizvajalci s predstavtvijo izdelkov pogosto nagovarjajo tudi k nakupu in uživanju živil z manj zdravim prehranskim profilom. V raziskavi smo preverili prehranski profil 90 naključno izbranih živil iz devetih prehranskih kategorij, ki z embalažo nagovarjajo otroke. S pomočjo Prehranskih smernic za oblikovanje pravil ravnanja za zaščito otrok pred neprimernimi komercialnimi sporočili in prehranskega semaforja smo ocenili kako ustrezna so živila za prehrano otrok. Izsledki kažejo, da je spodbujanje glede na smernice upravičeno pri manj kot petini pregledanih živil. To so živila iz štirih prehranskih kategorij, in sicer se k uživanju lahko spodbuja devet mesnih izdelkov, štiri izdelke iz skupine sirov, dve pijači in en mlečni namaz. Raziskava kaže, da otroke s predstavtvijo nagovarjajo predvsem živila, pri katerih zaradi previsoke vsebnosti sladkorja, maščob ali soli zasveti rdeča luč na prehranskem semaforju in zato niso primerne za vsakodnevno uživanje. Menimo, da je izboljšanje obravnavane problematike mogoče doseči z družbeno odgovornejšim ravnanjem proizvajalcev ter ob izboljšanju prehranske pismenosti otrok in staršev.

**Ključne besede:** otroci, prehranski profil živil, prehrana otrok, živilska industrija

## **Evaluation of the nutrient profiles of foods targeting children**

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With their products and product presentation, food industry has a significant impact on people's eating habits. Children are a particularly vulnerable group, as they are often encouraged by food industry to buy and eat food with an unhealthy nutritional profile. In our study we have analysed the nutritional profile of randomly selected foods targeting children with packaging, from nine nutritional categories. The nutritional profile of each individual foodstuff was assessed using Nutritional Guidelines to form codes of conduct in protecting children against inappropriate advertising and traffic light labelling. Results showed that less than a fifth of the examined food products are suitable for children's diet according to the guidelines. Only foods from four categories, which includes nine meat products, four products from a group of cheeses, two beverages and one dairy spread could be promoted. Our research therefore concludes that mainly foods with high content of sugar, fat or salt (red light on a traffic light), are targeted to children and are therefore not suitable for daily consumption. We believe that described problem could be resolved by socially more responsible behaviour of the industry and by improvement of nutritional literacy of children and their parents.

**Keywords:** children, nutritional profile, children's diet, food industry

## Pametni gospodinjski aparati in mobilna aplikacija za zdravje mladostnikov

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**Uvod:** Sodobne IKT rešitve spreminjajo procese in odnose v družbi. Otroci in mladostniki so pri tem še posebej izpostavljeni. Zaradi tega moramo uporabo IKT obravnavati kritično in družbeno odgovorno, pri tem pa izkoristiti njene pozitivne vplive na mladostnike na področjih zdravja, izobraževanja ali medčloveških odnosov.

**Metode:** V raziskavi smo obravnavali uporabo pametnih gospodinjskih aparatov in mobilne aplikacije. Z anketo smo kvalitativno ocenjevali vplive IKT na življenjski slog, odnos do zdrave prehrane ipd. Predpostavljeni smo, da je vpliv lahko direkten, saj se mladostniki že zelo zgodaj srečajo z IKT, predvsem pa preko starejših članov gospodinjstva.

**Rezultati:** Rezultati ankete, izpeljane z vprašalnikom v začetku 2019 v Sloveniji in na Nizozemskem, omogočajo razumevanje vplivov IKT: zavedanje zmožnosti teh rešitev; izboljšanje odnosa do zdravega življenjskega sloga; pripravljenost na spremembe obnašanja. Rezultate smo ovrednotili ob upoštevanju velikosti vzorca ( $n=11$ ), ki je bil omejen zaradi znatnih stroškov aparatov.

**Razprava in zaključek:** Sodobne IKT pozitivno vplivajo na spodbujanje zdravega življenjskega sloga. Poznane rešitve s področja zabave in družabnih medijev lažje privabijo mlajše uporabnike. Zaradi tega je potrebno tudi izdelke, kot so gospodinjski aparati s pripadajočo aplikacijo, naređiti privlačne za mladostnike. Pomembne kvalitete teh rešitev so zanimiva in zabavna uporaba ter enostavno in varno delovanje.

**Ključne besede:** digitalizacija družbe, mladostniki, zdrav življenjski slog, pametni gospodinjski aparati, mobilna aplikacija

## **Smart home appliances and mobile app for the health of adolescents**

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**Introduction:** Modern ICT solutions change processes and relationships in society. Children and adolescents are particularly exposed here. For this reason, we need to address the use of ICT critically and responsibly, exploiting its positive effects on adolescents in the fields of health, education or interpersonal relationships.

**Methods:** The study looked at the use of smart home appliances and mobile application. The survey assessed the impact of ICT on life-style, attitude towards healthy nutrition etc. We assumed that the impact could be direct, as adolescents are already meeting ICT very early, and through older members of the household.

**Results:** The results of the survey conducted with a questionnaire in the beginning of 2019 in Slovenia and the Netherlands enable understanding of the impacts of ICT: awareness of these solutions' potential; improving the attitude towards a healthy lifestyle; readiness to change behaviour. The results were evaluated considering the sample size ( $n=11$ ), which was limited due to the high cost of the appliances.

**Discussion and conclusions:** Modern ICT has a positive impact on the promotion of a healthy lifestyle. Well-known solutions in the field of entertainment and social media attract younger users easily. For this reason, it is also necessary to make products such as household appliances with a corresponding application attractive for adolescents. The important qualities of these solutions are interesting use, and simple and safe operation.

**Keywords:** digitalization of society, adolescents, healthy lifestyle, smart home appliances, mobile application

## **Spodbujanje k zdravi izbiri živil in h kritičnem vrednotenju oglaševanja živil**

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V otroštvu je zdrava prehrana ključna za rast in razvoj otrok, zato je za ohranjanje in krepitev zdravja otrok pomembno, da se otroke v družini in vzgojno-izobraževalnih ustanovah spodbuja k izbiri in uživanju zdravih živil. Starši pogosto skupaj z otroki kupujejo hrano in številni dejavniki, med katerimi je pomembno tudi oglaševanje, vplivajo na njihove nakupne odločitve. Otroci so nekritični do oglaševanja manj zdravih živil in ne prepoznaajo prodajnega nameна oglaševanja. Zato je treba izvajati izobraževanje in dejavnosti, ki učinkovito ozaveščajo otroke in starše o pomenu kritičnega vrednotenja živil za zdravo prehranjevanje in so prilagojene kognitivnemu razvoju otrok. V ta namen so bile oblikovane, izvedene in ovrednotene različne vzgojno-izobraževalne dejavnosti, ki so spodbujale udeležence k zdravi izbiri in uživanju živil z zdravim prehranskim profilom. Dejavnosti so bile namenjene vrtčevskim otrokom, otrokom prvega vzgojno-izobraževalnega obdobja in njihovim staršem. Pri izvajanju dejavnosti je bilo ugotovljeno, da aktivni didaktični pristopi spodbudijo otroke k aktivnemu vključevanju v izvajanje dejavnosti in povečajo raven motivacije za prenos veščin v domače okolje. Obravnavna izbire in nakupovanja živil ter kritično vrednotenje oglašnih sporočil v vzgojno-izobraževalnih programih lahko pomembno vpliva na motivacijo otrok in staršev, da se odločajo za vključevanje zdravih živil v prehrano, zato je treba spodbujati izobraževanje na tem področju.

**Ključne besede:** otroci, prehransko izobraževanje, oglaševanje, zdravo prehranjevanje

## **Promoting healthy food choices and critical evaluation of food advertising**

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In childhood, healthy nutrition is crucial for the growth and development of children. Therefore, in order to maintain and enhance the health of children, it is important that children in the family and educational institutions are encouraged to choose and eat healthy foods. Parents often buy food with children, and many factors, including advertising, affect their buying decisions. Children are uncritical in advertising less healthy foods and do not recognize the selling purpose of advertising. It is therefore necessary to implement education and activities that effectively raise children and parents about the importance of the critical evaluation of foods for healthy eating and are tailored to the cognitive development of children. For this purpose various educational activities were created, implemented and evaluated, which are stimulating participants to healthy choice and consumption of foods with a healthy dietary profile. Activities were aimed at kindergarten children, children of the first educational period and their parents. In carrying out activities, it was found that active didactic approaches encourage children to actively participate in the implementation of activities and increase the level of motivation for transferring skills to the home environment. Discussing the choice of buying food and critical evaluation of advertising messages in educational programs can significantly affect the motivation of children and parents to decide on the inclusion of healthy foods in the diet, so education in this area needs to be encouraged.

**Keywords:** children, dietary education, advertising, healthy eating



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